



**Oregon State**  
University

# CAMPUS MASTER PLAN MONITORING REPORT

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## 2021

CAPITAL PLANNING & DEVELOPMENT  
UNIVERSITY LAND USE PLANNING  
PUBLISHED APRIL 18, 2022

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## Appendix

- Appendix A** – Sector Development Tracking Report
- Appendix B** - Parking Utilization Study
- Appendix C** – Corvallis On-Street Parking Utilization Study
- Appendix D** – Bike Parking Utilization Study
- Appendix E** – Traffic Operation Study

## REPORT CONTRIBUTORS

Susan Padgett, Campus Planner

Rebecca Houghtaling, Senior Planner

Sara Robertson, Associate Planner

Sarah Bronstein, Sustainable Transportation Manager

## ADDITIONAL INFORMATION/CONTACTS

For additional information or questions concerning this report, please contact Robert Richardson, OSU University Land Use Planning Manager, at 541-737-8503 or [robert.richardson@oregonstate.edu](mailto:robert.richardson@oregonstate.edu).

# OVERVIEW

Oregon State University (OSU) is responsible for the completion of an annual Campus Master Plan (CMP) Monitoring Report. Section 3.36.90 of the City of Corvallis Land Development Code (LDC) identifies the information to be included in the 2019 CMP Monitoring Report. This report follows the order of LDC Section 3.36.90.

# COMPLIANCE

In the following section, the CMP Monitoring Report will demonstrate OSU’s compliance with the requirements of LDC Section 3.36.90 for the past calendar year. LDC sections are shown in bold, italic text. Supporting documents have been included as appendices.

# DEVELOPMENT

## ***LDC Section 3.36.90.a.1.a - Gross square footage of development by type that occurred in each Sector over the previous 12-month period***

Oregon State University is divided into nine sectors (identified A – J), each with an approved building square footage. OSU’s University Land Use Planning staff tracks university development and prepares Campus Sector Development Tracking Reports (refer to *Appendix A* for the 2021 report). In 2021, changes in sector development occurred in three of the nine sectors. Sectors C, and F experienced a decrease in total development, while Sectors E experienced an increase in development. Campus wide total new development footprint decreased by 138,366 GSF. The campus wide gross square footage increased by 99,428 GSF. Campus wide structure footprint decreased by 32,615 SF, and parking and impervious surface area decreased by 105,751 SF across campus (refer to *Table 1: 2021 Development by Sector.*) The largest changes occurred in Sector F and C. In Sector F, the changes were due to demolitions and renovations related to development of the wellness clinic. The changes in Sector C were due to two major projects: the redevelopment of the former Facilities Services shops area in preparation for the Arts and Education Complex at 15<sup>th</sup> and Washington Way, and the removal of Fairbanks Annex and redevelopment of the surrounding area occurring as part of the Fairbanks Hall renovation.

**Table 1: 2021 Development by Sector**

OSU Sector	Gross Square Footage	Structure Footprint	Parking / Impervious Surface	Total New Development Footprint
Sector A	0	0	0	0
Sector B	0	0	0	0
Sector C	12,311	3,031	-84,443	-81,412
Sector D	0	0	0	0
Sector E	49	84	0	84
Sector F	87,068	-35,730	-21,308	-57,038
Sector G	0	0	0	0
Sector H	0	0	0	0
Sector J	0	0	0	0
<b>Total Campus Development</b>	<b>99,428</b>	<b>-32,615</b>	<b>-105,751</b>	<b>-138,366</b>

**LDC Section 3.36.90.a.1.b - Remaining Available Development Allocation for each Sector**

The Campus Sector Development Tracking Report dated January 5, 2022, (refer to *Appendix A*) shows that all campus sectors remain within their allowable development allocation; refer to Land Development Code (LDC) *Table 3.36-2: Building Square Footage by Sector* for permitted development allocation. Campus Sectors E and C have the lowest available remaining development allocation by percentage, while Sectors E and H have the lowest by available GSF (*Table 2: 2021 Remaining Development Allocation per Sector*). Sectors A, B, H and J have the highest remaining development allocation by percentage, while F has the highest remaining development allocation by available GSF. Remaining Development Allocations that exceed 100 percent result from the removal of buildings and/or the removal and replacement of buildings with smaller structures.

OSU Sector	Existing Building Gross Square Footage	Maximum Future Building Allocation (GSF)	Development Since 12/2004 (GSF)	Remaining Development (GSF)	Remaining Development Allocation
Sector A	281,551	250,000	-5,936	255,936	102%
Sector B	831,426	405,000	70,374	334,626	83%
Sector C	4,685,510	679,000	546,022	132,978	20%
Sector D	325,506	201,000	74,082	126,918	63%
Sector E	253,046	120,000	118,961	1,039	1%
Sector F	847,166	750,000	253,534	496,466	66%
Sector G	742,092	350,000	185,079	164,921	47%
Sector H	133,535	50,000	5,274	44,726	89%
Sector J	41,851	350,000	-2,100	352,100	101%
<b>Total Campus Development</b>	<b>8,141,683</b>	<b>3,155,000</b>	<b>1,245,290</b>	<b>1,909,710</b>	<b>61%</b>

**LDC Section 3.36.90.a.1.c - Remaining open space areas and percentages for each Sector**

The Campus Sector Development Tracking Report (*Appendix A*) demonstrates that open space on campus remains within allowable limits. The sectors with the lowest remaining developable open space are Sectors A, D, and E as *Table 3: 2021 Remaining Open Space by Sector* illustrates. The sectors with the highest remaining developable open space are Sectors B and C. All sectors exceed the minimum amount of open space required per LDC *Table 3.36-3: Minimum Future Open Space by Sector*.

**Table 3: 2021 Remaining Open Space**

OSU Sector	Sector Area	Existing Open Space	New Development Total Footprint	Open Space After Development	Minimum Future Open Space	Remaining Open Space Development	% of Sector
Sector A	3,358,166	2,791,263	107,664	2,683,599	2,619,369	64,230	2%
Sector B	3,129,255	1,783,775	130,349	1,653,426	1,032,654	620,772	20%
Sector C	6,863,033	3,980,931	-56,811	4,037,742	2,470,692	1,567,050	23%
Sector D	1,953,994	1,267,652	17,310	1,250,342	1,191,936	58,406	3%
Sector E	2,870,819	2,335,426	118,415	2,217,011	2,210,531	6,480	0.2%
Sector F	2,062,341	759,968	-31,411	791,379	412,468	378,911	18%
Sector G	1,360,414	796,464	71,396	725,068	544,166	180,902	13%
Sector H	1,030,317	714,317	-40,216	754,533	659,403	95,130	9%
Sector J	2,276,565	2,238,667	-1,685	2,240,352	1,798,486	441,866	19%
<b>TOTAL</b>	<b>24,904,904</b>	<b>16,668,463</b>	<b>315,011</b>	<b>16,353,452</b>	<b>12,939,705</b>	<b>3,413,747</b>	<b>14%</b>

## PARKING UTILIZATION REPORTS

### ***LDC Section 3.36.90.a.2.a - Identification of OSU –owned parking spaces created or removed over the previous 12-month period.***

Between fall term 2020 and fall term 2021 three parking lots were added to the parking system and one was permanently removed from the parking system. The Western Complex Lot (3370) was reconstructed and converted to a Commuter Zone lot adding 132 parking spaces to the university’s parking system. The N. 16th St. West Lot (3223) and the N. 16th St East Lot (3224), were returned to Oregon State management and converted from Non-OSU lots to Residence Hall lots. The N. 16th St. West Lot (3223) adds 155 spaces to the inventory and the N. 16th St East Lot (3224) adds 36 spaces to the OSU parking inventory. The Navy ROTC Armory East Lot (3265) was decommissioned, permanently removing 12 spaces from the parking inventory. A detailed discussion of parking capacity, utilization, and facility changes is contained within *Appendix B: OSU Parking Utilization Study 2021-2022*.

### ***LDC Section 3.36.90.a.2.b – The total number of publicly-available, OSU-owned spaces provided within the CMP boundary.***

General Use parking spaces are available to the general public commuting daily to campus to visit, work, or attend classes, as well as to residents living on campus. General Use parking space types include Commuter, Residence Hall, ADA, Carpool, Reserved, and Short Term/Metered. In 2021 OSU had a campus-wide parking capacity of 5,911 OSU General Use spaces in Commuter Zone lots and 1,317 Residence Hall spaces in Residence Hall lots, for a total of 7,228 spaces providing parking to commuters and campus residents (*Table 4: OSU Parking Capacity*). This represents an increase of 194 spaces from the previous year, 100 General Use parking spaces in Commuter zone lots and 94 Residence Hall spaces in Residence Hall lots. A detailed discussion of parking capacity, utilization, and facility changes is contained within *Appendix B: OSU Parking Utilization Study 2021-2022*.

**Table 4: OSU Parking Capacity**

Academic Year	Commuter*	Carpool	Reserved**	Short Term/ Metered	ADA	Total General Use Spaces	Residence Hall	Total General Use & Residence Hall Spaces
2017 - 2018	5,063	10	185	353	348	5,959	1,118	7,077
2018 - 2019	5,119	10	186	341	349	6,004	1,119	7,123
2019 - 2020	5,030	10	184	280	350	5,854	1,221	7,075
2020 - 2021	4,972	11	172	320	337	5,811	1,223	7,034
2021 - 2022	5,154	10	176	248	323	5,911	1,317	7,228

Note: All numbers are rounded to the nearest whole number.

\*The Commuter space type includes Commuter and Free spaces. For academic years prior to 2017-2018, the Commuter space type includes Commuter, Free, and Visitor spaces.

\*\*Reserved spaces include spaces reserved for Electric Vehicles.

**LDC Section 3.36.90.a.2.c – A breakdown of parking lot type and space type by sector; and.**

As Table 5: OSU Parking Capacity by Sector 2014 - 2021 illustrates, most sectors retained nearly the same capacity as the previous year. Annual changes in parking capacity can be attributed to the construction of new parking facilities, parking spaces temporarily out of service or returning to service after construction or maintenance, and changes in the management of spaces or lots. For example, General Use spaces that are converted to Service or Loading Zone spaces would result in a reduction of public parking capacity. Sectors B, D, F, G, and H had capacities that deviated by less than 10 spaces from their 2020 capacities. Sector A had a decrease of 31 spaces. Sector C had an increase of 111 spaces primarily due to the addition of the N. 16th St. West Lot (3223) and the N. 16th St East Lot (3224) to the parking inventory. Sector E had an increase of 120 spaces with the addition of the Western Complex Lot (3370). A detailed discussion of parking utilization is available in *Appendix B: OSU Parking Utilization Study 2021-2022*.

**Table 5: OSU Parking Capacity by Sector 2014 - 2021**

Sector	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
A	209	208	208	222	220	222	222	191
B	668	655	681	726	747	1,124	1,179	1,179
C	1,587	1,484	1,419	1,475	1,484	1,459	1,368	1,479
D	869	793	920	883	883	1,076	1,079	1,072
E	163	152	164	159	159	159	155	275
F	1,206	1,274	1,220	1,254	1,273	1,274	1,273	1,274
G	984	944	857	940	940	1,463	1,461	1,461
H	46	258	288	298	298	298	298	298
<b>Total Spaces</b>	<b>6,840</b>	<b>6,762</b>	<b>6,895</b>	<b>7,077</b>	<b>7,123</b>	<b>7,075</b>	<b>7,034</b>	<b>7,228</b>

**Table 6: OSU Parking Spaces by Type and Sector**

Sector	Commuter	Residence Hall	Carpool	Reserved	Short Term Meter	ADA	Total
A	183	0	0	0	0	8	191
B	848	284	2	7	6	32	1,179
C	932	215	5	87	98	142	1,479
D	745	300	1	7	2	17	1,072
E	258	0	0	7	2	8	275
F	1,144	0	1	41	28	60	1,274
G	755	518	1	27	112	48	1,461
H	290	0	0	0	0	8	298
<b>Total Spaces</b>	<b>5,154</b>	<b>1,317</b>	<b>10</b>	<b>176</b>	<b>248</b>	<b>323</b>	<b>7,228</b>

***LDC Section 3.36.90.a.2.d – Percentage of parking space utilization campus-wide***

The campus-wide parking utilization rate is calculated as the ratio of occupied spaces to the total number of OSU General Use spaces in Commuter Zone parking lots. The 2021-2022 parking utilization rate was 63 percent. This is a significant increase from the 21 percent utilization rate of the previous year, which was heavily impacted by the COVID-19 pandemic, but it is not as high as utilization rates from years prior to the pandemic, which ranged from 73 percent to 76 percent utilization in the three years prior to the pandemic. OSU’s Residence Hall parking utilization rate also rose from 53 percent in 2020-2021 to 80 percent in 2021-2022 (Table 11: OSU Parking Utilization, Table 12: Residence Hall Parking Utilization). The Residence Hall parking utilization rate more closely matches its pre-pandemic levels, which ranged from 81 percent to 84 percent between the 2017-2018 academic year and the 2019-2020 academic year. Accordingly, the combined utilization rate of General Use and Residence Hall parking increased from 27 percent to 66 percent.

In survey years prior to the pandemic, utilization rates have remained fairly constant. The General Use utilization rate has fluctuated between a low of 71 percent in the 2018-2019 academic year and a high of 75 percent in 2019-2020. The combined General Use and Residence Hall utilization rate has fluctuated between a low of 73 percent in 2018-2019 and a high of 76 percent in 2019-2020 academic years (refer to Table 7: OSU Parking Utilization Past Five Years). A detailed discussion of parking utilization is available in *Appendix B: OSU Parking Utilization Study 2021-2022*.



**Table 7: OSU Parking Utilization Past Five Years**

Sector	2017 - 2018			2018 - 2019			2019 - 2020			2020 - 2021			2021 - 2022		
	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization
A	222	114	51%	220	128	58%	222	140	63%	222	29	13%	191	60	31%
B	726	554	76%	747	576	77%	750	616	82%	805	211	26%	895	642	72%
C	1,475	1,057	72%	1,484	1,068	72%	1,427	1,085	76%	1,336	341	26%	1,264	857	68%
D	885	678	77%	883	663	75%	782	622	79%	780	114	15%	772	488	63%
E	159	109	69%	159	116	73%	159	101	63%	155	55	35%	275	160	58%
F	1,254	1,047	83%	1,273	1,129	89%	1,274	1,127	88%	1,273	373	29%	1,274	971	76%
G	940	615	65%	940	483	51%	942	574	61%	943	109	12%	943	515	55%
H	298	176	59%	298	84	28%	298	99	33%	298	14	5%	298	35	12%
Total OSU General Use	5,959	4,349	73%	6,004	4,247	71%	5,854	4,363	75%	5,811	1,245	21%	5,911	3,727	63%
Residence Hall Spaces	1,118	902	81%	1,119	920	82%	1,221	1,027	84%	1,223	642	53%	1,317	1,058	80%
Total OSU General Use & Residence Hall	7,077	5,251	74%	7,123	5,167	73%	7,075	5,390	76%	7,034	1,887	27%	7,228	4,785	66%

# TRANSPORTATION DEMAND MANAGEMENT

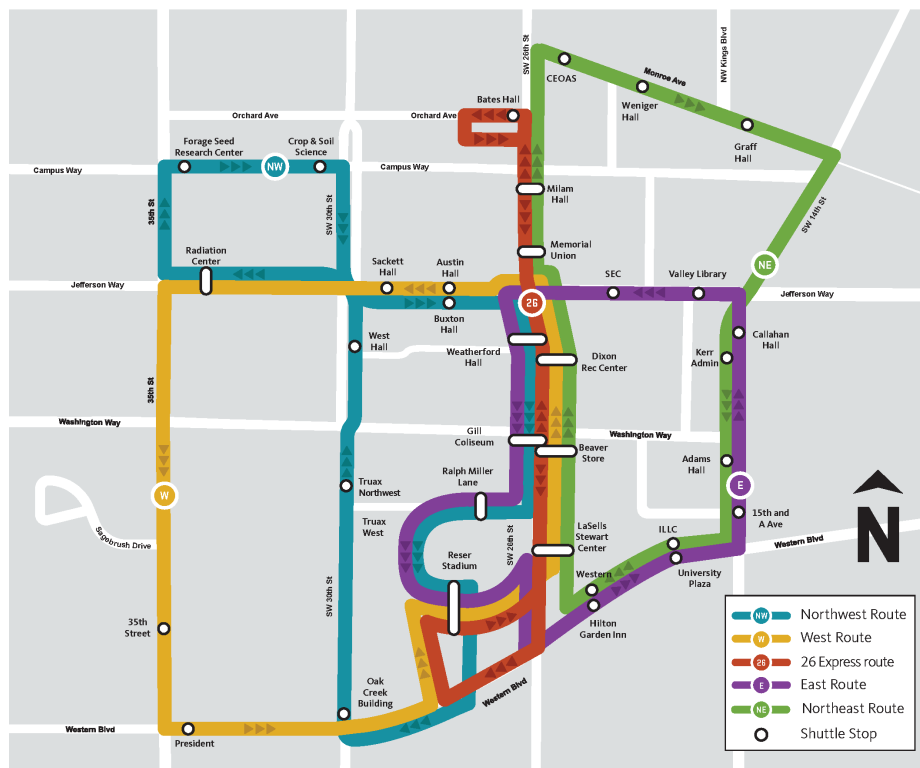
**LDC Section 3.36.90.a.3. TDM Report - The TDM Report that identifies efforts and the effectiveness of those efforts undertaken by the University over the previous 12 months to reduce reliance on the single-occupant vehicle. Such efforts shall include, but not be limited to:**

## **LDC Section 3.36.90.a.3.a - Shuttle routes and usage**

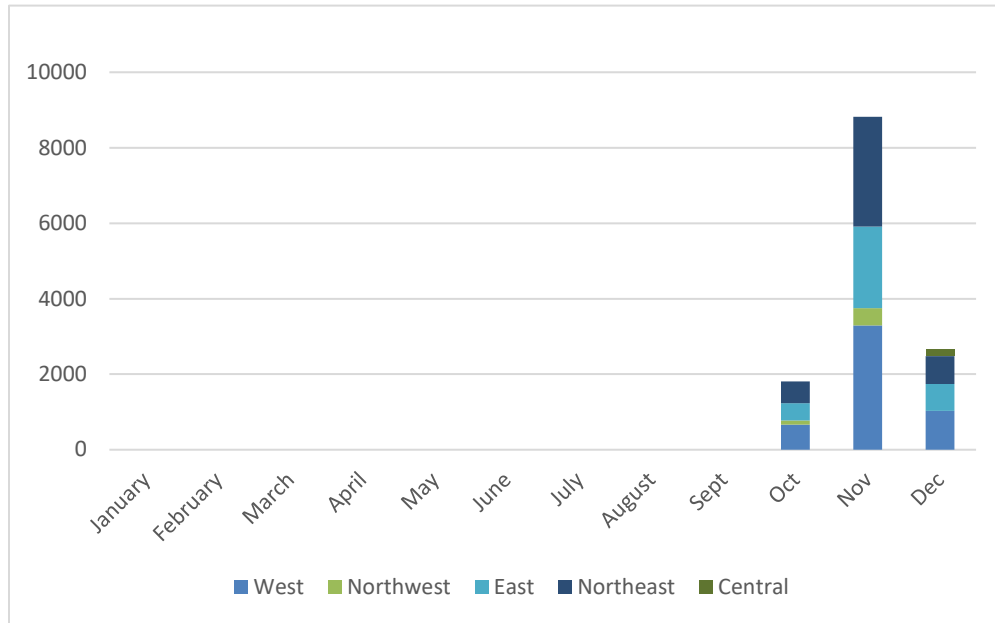
OSU’s free on-campus shuttle service, the Beaver Bus, runs throughout the Corvallis campus Monday through Friday, 7 a.m. to 7 p.m. When the system is fully operational, the Beaver Bus operates along five (5) routes during the fall, winter and spring terms, and a central route during breaks and summer term. OSU tracks Beaver Bus ridership using automatic passenger counters (APCs), which were installed in July of 2017.

Beaver Bus operations were initially suspended in March of 2020, and remained suspended through August of 2021. During this time, work and instruction at OSU was conducted remotely in response to the COVID-19 pandemic. OSU’s shuttle bus system resumed operations in September of 2021 as the university resumed in-person learning and work. Five routes were planned for the resumption of service (see below). However, due to ongoing driver shortages, service has so far been limited to four routes, with the 26 Express route out of service. The Central Route operated during school breaks. Passenger counts were conducted by hand, due to technical difficulties with the APCs.

**Figure 1: Beaver Bus AY22 Planned Routes**



**Figure 2: Beaver Bus Ridership by Route**



***LDC Section 3.36.90.a.3.b - Other efforts in support of transit, car-pool or vanpool usage***

**Transportation Demand Management Planning**

In 2021, OSU began efforts to implement the newly approved 2030 Sustainable Transportation Strategy: A Transportation Demand Management Plan for the Corvallis Campus. The Strategy established a goal of reducing the percentage of student and employee drive-alone trips to campus by a third, from 30% in 2019 to 20% by the year 2030.

To achieve this goal of reducing single-occupancy vehicle trips drive-alone trips, the plan identifies 15 actions to be completed over the next 10 years. The actions follow a conceptual framework called the Four C's: Cost, Convenience, Concrete and Culture. This framework acknowledges that the transportation choices people make are the result of many different factors, including how much a trip costs, how long it takes, how safe it feels, or even how normal it is among peers.

Progress has been made on some actions already. Action 7, to better connect the Beaver Bus to CTS routes by running a new shuttle bus route along Monroe, was completed in the fall of 2021. OSU Human Resources updated OSU's remote work policy (Action 5) and agreement form for Faculty and Staff to allow for more flexibility and support for working from home. Furthermore, OSU has partnered with Oregon Cascades West Council of Governments on a successful grant application to plan two regional transit mobility hubs, one at OSU and one at Linn Benton Community College in Albany. A design firm has been selected and stakeholder engagement is now underway. Once completed, the OSU Mobility Hub (Action 9) will provide improved visibility and high quality rider amenities for intercity bus services at the OSU Corvallis campus. Lastly, OSU is in the initial stages of planning for a Commute Platform service (Action 2) that will consolidate all transportation transactions and services in one place, allowing easy implementation of daily parking (Action 1) charges and sustainable transportation incentives (Action 3).

## **Outreach and Education**

OSU Transportation Services continued to conduct outreach and education for members of the OSU community throughout 2021. OSU Transportation Services maintains two webpages devoted to providing transportation information to new students and new employees. These webpages provide a wide range of information about alternative transportation options alongside parking information. Transportation Services staff also attended new student orientations in person and remotely throughout the summer, to talk to students about transportation and to encourage them not to bring a car to campus if possible.

In the fall of 2021, the department also hosted the third annual Poker Ride, an in-person bicycle orientation event for new students. Attendees received free bike lights, and rode to five designated stops around campus to learn about campus bike resources and road safety.

## **Ridesharing and Carsharing**

OSU hosts a carsharing service, Zipcar, for students and employees who want access to a vehicle on campus for personal trips. With a paid membership, members can unlock cars, make a reservation, or change their reservation online or with a mobile phone app. Zipcar provides a membership discount to OSU students and staff. As of December 2021, the campus fleet of Zipcars was four (4) cars. This was a reduction of two (2) cars from the previous year.

## **Transit**

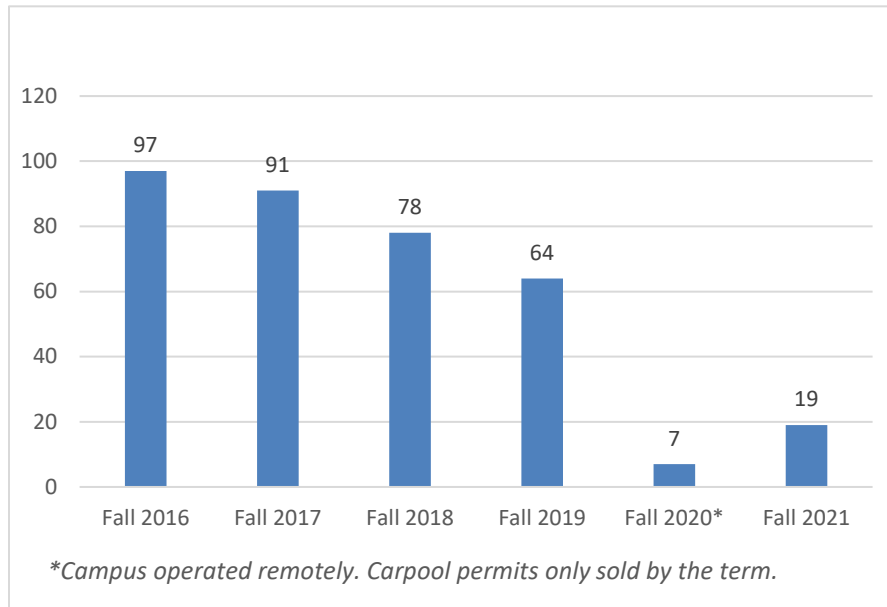
OSU contributed to four (4) separate transit systems in Fiscal Year 2021-2022 (FY22): Corvallis Transit System (CTS), the Night Owl, Albany Transit, and the Linn-Benton Loop. In FY22, OSU provided \$172,820 in general funds towards CTS service. An additional \$52,434 in student fees was dedicated to cover operational costs for the Night Owl, CTS's late night transit service. OSU general funds also provided \$128,100 to the City of Albany for the Linn-Benton Loop, and \$3,200 for Albany Transit service. Lastly, OSU is assessed approximately \$80,000 in Transit Operations Fees through the institution's water bill. In total, for FY22 OSU contributed \$433,354 towards local transit services for OSU students and staff.

### ***LDC Section 3.36.90.a.3.c - Tabulation of the number of carpool permits issued***

OSU Transportation Services defines carpools as vehicles carrying two (2) or more people. Drivers who purchase an annual carpool parking permit can park in dedicated carpool parking spaces on campus. The department sold 19 carpool permits in the fall of 2021, as many drivers switched from annual permits to monthly permits to allow for greater flexibility.

Two vanpools resumed service to the OSU Corvallis campus in the fall of 2021, both from the Eugene/Springfield area.

**Figure 3: Carpool Parking Permit Sales**



**LDC Section 3.36.90.a.3.d - Location and number of bicycle parking spaces, including the number of covered spaces and any additions to the inventory**

OSU conducts a bicycle utilization survey every two years. OSU conducted the most recent bicycle parking study in fall of 2021. The next bicycle parking survey will be conducted in fall 2023. The previous bicycle parking survey was conducted in 2019. During the 2021 bike parking survey, OSU inventoried 9,105 bicycle parking spaces on campus (Table 8: OSU Bike Parking Capacity 2008-2021). Of the 9,105 spaces, 3,437 spaces (38 percent) were covered and 5,668 spaces (62 percent) were uncovered (Table 9: Campus Bike Parking Capacity). 2021 experienced a minor increase in capacity over the 2019 capacity. New bike parking was provided at the Campus Operation Center, while some bike parking was unavailable due to construction activities at Fairbanks Annex and Cordley Hall. Appendix D: OSU Bicycle Parking Utilization Study 2021.

Survey Year	Campus Wide Capacity
2008	6,145
2010	6,842
2012	7,491
2014	8,181
2015	8,855
2017	8,942
2019	8,969
2021	9,105

Survey Year	Covered Spaces	Uncovered Spaces	Total Capacity	Covered Capacity
2008	1,759	4,386	6,145	29%
2010	2,108	4,734	6,842	31%
2012	2,326	5,165	7,491	31%
2014	2,755	5,426	8,181	34%
2015	3,222	5,633	8,855	36%
2017	3,310	5,632	8,942	37%
2019	3,313	5,656	8,969	37%
2021	3,437	5,668	9,105	38%

### ***LDC Section 3.36.90.a.3.e - Identification of campus pedestrian routes and system improvements***

In 2021, Oregon State University improved approximately 800 feet linear feet of pedestrian routes outside of major development projects. The majority of these improvements were conducted near Orchard Court student housing, where trees had damaged sidewalk panels.

## **TRAFFIC OPERATIONS STUDY**

### ***LDC Section 3.36.90.a.4 – Traffic Operations Study that includes the following components every three years-***

This criterion requires that OSU conduct traffic operations studies every three years. The most recent Traffic Operations Study was conducted in fall of 2021. In fall 2021, OSU conducted a Traffic Operations Study. The 2021 CMP Monitoring Report provides details of that study in compliance with the criteria of LDC that were in effect at that time. The next TOS will be conducted in 2023. Between 2018 and 2019, the LDC criteria for reporting on the Transportation Operations study was revised. The details of the TOS as applicable to the current LDC are provided below for reference. The complete 2021 TOS is provided in Appendix E: Traffic Operations Study.

### ***LDC Section 3.36.90.a.4.a – Conduct vehicle turn movement counts at 28 intersections in and around the OSU campus over a two-day period during the fourth week in fall term. Collect directional volume counts (72-hour road tube counts) at a minimum of ten locations on streets within or immediately adjacent to campus.***

In fall 2021, traffic volume counts were completed in order to establish an understanding of traffic flows on key streets in the area: tube counts of directional auto traffic on roadway segments over a 72-hour period and intersection turning movement counts of all modes during morning and evening peak periods of demand. Seventy-two hour vehicle roadway segment counts (tube counts) were collected at 12 locations on and near campus (See Figure 3a and Figure 3b in *Appendix E: Traffic Operations Study Update: 2021-2022*). The data includes vehicle volume, classification (e.g., motorcycle, auto, light truck, bus, and heavy vehicle), direction of travel, and speed. Graphs contained within Figure 3a and Figure 3b show the average hourly directional (red and green lines) and bidirectional (blue lines) weekday traffic volume profile at each tube count location. Traffic counts were also conducted at twenty-eight required intersections. Additionally, vehicle turn movements were analyzed for the twenty-eight study intersections, which are identified in Appendix E: *Traffic Operations Study Update: 2021-2022, Figure 1 – 2021-2022 TOS Study Intersections*.

### ***LDC Section 3.36.90.a.4.b – Analyze vehicle traffic operations to determine intersection performance during the weekly AM and PM peak hour using industry standard performance metrics;***

An assessment of traffic volumes at key locations identified the weekday a.m. peak hour as 7:35-8:35 a.m. and the weekday p.m. peak hour as 5:00-6:00 p.m. Figures 4a, 4b, 5a, and 5b within the *Traffic Operations Study Update: 2021-2022*. Appendix E within this report provide a summary of the 2021-2022 operations analysis results for the weekday a.m. and p.m. peak hours, respectively. The operational results worksheets are also provided in Appendix C of that report.

In the 2021-2022 Traffic Operations Study, only one study intersection does not meet performance standards. SW 26th Street at US 20/OR 34 had a v/c ratio of 0.88 for the weekday p.m. peak hour. The

intersection of SW 26th Street at US 20/OR 34 also did not meet standards for the 2014-2015, 2015-2016, 2016-2017, 2017-2018, and 2018-2019 assessments, although a v/c ratio standard was not in use for those assessments. The City studied the intersection of SW 26th Street at US 20/OR 34 during its TSP update and also concluded that the studied intersection did not meet standards.

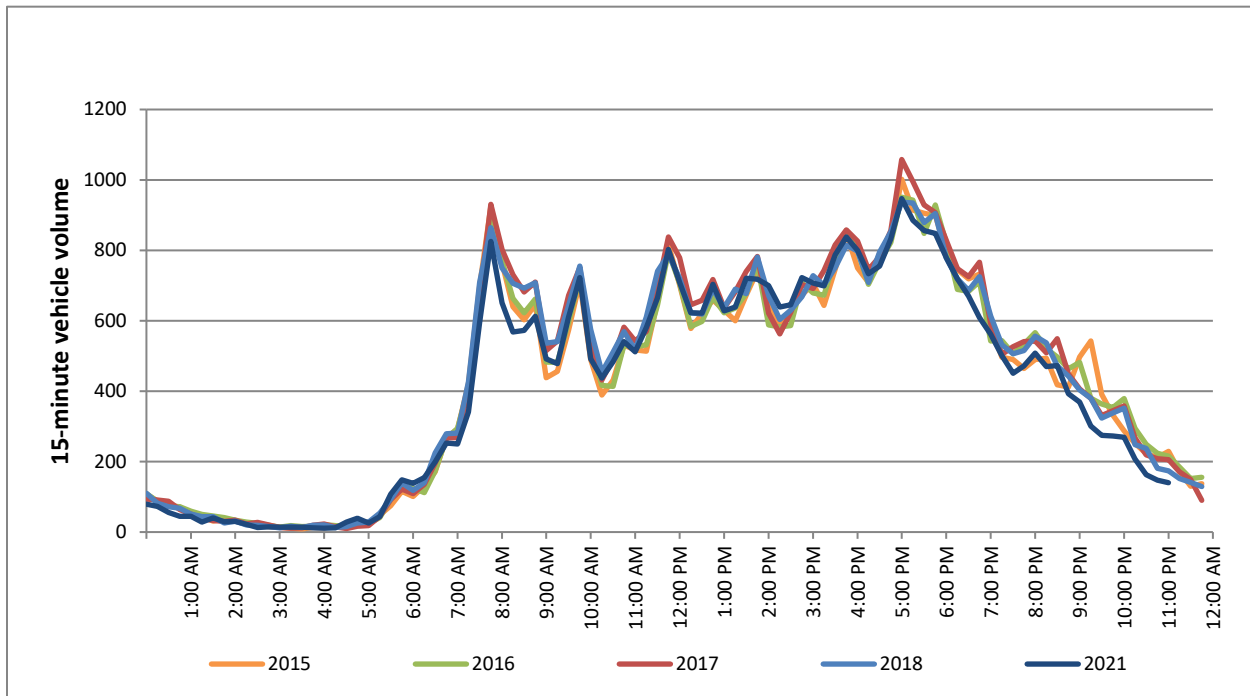
***LDC Section 3.36.90.a.4.c – Identify intersection deficiencies and potential mitigation measures, including impacts to other modes***

Analysis conducted to date has found that one intersection does not meet operational standards during the weekday p.m. peak period only, compared to a range of four to eight intersections in the previous six annual studies, respectively. The intersection of SW 26th Street at US 20/OR34 may warrant further monitoring to determine if its operations are contributing to critical crash rates or other system degradation. It will be important for OSU to coordinate with the City and ODOT, during long-range planning efforts to ensure the identification of appropriate solutions and that partners contribute proportionally to their impacts. A detailed discussion of the analysis of this intersection can be found in *Appendix E: Traffic Operations Study Update: 2021-2022*.

***LDC Section 3.36.90.a.4.d – Provide a summary of the tube-count data and comparison to previous year's data collection.***

*Exhibit 1: System Volume Comparisons from 2013 to 2018 – North/South Routes* from the *Traffic Operations Study Update: 2021-2022* illustrates the cumulative northbound/southbound traffic volumes measured by the road tubes (excluding the parking garage) throughout the day in 2021 compared to data for each of the previous five years. The time-of-day profiles of traffic volumes reveal a very strong similarity between the five (5) years of data. The 2021 traffic volume time-of-day profile is very similar to the data from the previous five (5) years, and typically not the highest measured volume during any given period of the day.

**Exhibit 1: System Volume Comparisons from 2015 to 2021 – North/South Routes**



Considering only the locations where data was collected all seven (7) years, traffic volumes are highest on 14<sup>th</sup> Street, south of Monroe Avenue and on 35<sup>th</sup> Street, north of Western Boulevard and north of Orchard Avenue. Of all the locations counted in 2021, however, the tube count location on SW Western Boulevard, east of SW 26<sup>th</sup> Street experienced the highest traffic volumes. Most of the tube count locations experienced higher vehicular demand during the weekday evening commuter peak than during the weekday morning commuter peak.

*Table 10: Average Weekday Roadway Volumes at Tube Count Locations* provides a comparison of peak hour and average daily traffic (ADT) volumes across seven years of measured data. Cells shaded in grey feature the highest measured peak hour and daily volume at each location and the year it occurred. The total tube count volumes measured at the first eight locations listed in the table are summed at the bottom. A comparison of these totals across the years shows a general decrease overall and an ADT decrease of 12% from 2018 to 2021, most likely in response to COVID-19 impacts and continued work-from-home operations for many businesses throughout the state. During the October 2021 data collection, the OSU Fall Term was in session with in-person classes, but some university staff continued to work partially or completely from home. Appendix E of this report provides additional data. See *Appendix E: Traffic Operations Study Update: 2018-2019*.



**Table 10: Average Weekly Roadway Volumes at Tube Count Locations**

Tube Count Location	2013			2014			2015			2016			2017			2018			2021		
	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour
SW 35 <sup>th</sup> St, north of NW Orchard Ave	7,020	675	4:45 PM	6,655	660	4:45 PM	7,765	725	5:00 PM	7,610	715	5:00 PM	7,670	760	5:00 PM	7,960	740	4:30 PM	6,755	640	4:45 PM
SW 35 <sup>th</sup> St, north of SW Western Blvd	5,925	670	4:45 PM	7,035	695	7:30 AM	7,620	725	7:30 AM	7,640	690	5:00 PM	7,865	755	4:45 PM	8,025	735	4:45 PM	7,470	685	4:45 PM
SW 30 <sup>th</sup> St, north of NW Orchard Ave	5,400	535	6:00 PM	5,625	505	5:00 PM	6,075	555	5:00 PM	6,135	570	5:00 PM	5,875	545	5:00 PM	5,870	510	5:00 PM	4,665	430	5:00 PM
SW 30 <sup>th</sup> St, north of SW Western Blvd	3,670	395	7:30 AM	3,345	330	7:30 AM	3,915	380	7:30 AM	4,165	390	7:30 AM	3,875	365	7:30 AM	3,830	355	7:45 AM	3,250	310	4:45 PM
SW 26 <sup>th</sup> St, north of SW Western Blvd	2,680	270	5:00 PM	3,755	310	3:15 PM	2,950	260	6:00 PM	2,745	240	5:00 PM	3,705	330	5:00 PM	3,335	285	5:00 PM	2,360	220	5:00 PM
SW 14 <sup>th</sup> St, south of NW Monroe Ave	8,830	725	5:00 PM	7,525	620	5:45 PM	8,935	800	5:00 PM	9,110	765	5:15 PM	9,375	800	5:00 PM	8,800	760	5:00 PM	8,470	750	5:00 PM
SW 15 <sup>th</sup> St, north of SW Western Blvd	6,700	545	4:45 PM	5,415	485	4:45 PM	6,570	585	5:00 PM	6,990	585	5:00 PM	7,495	615	5:00 PM	7,265	570	5:00 PM	6,790	550	5:30 PM
SW Washington Way, west of SW 15 <sup>th</sup> St	4,645	410	5:00 PM	3,560	315	5:00 PM	5,345	505	6:00 PM	4,830	440	5:00 PM	5,000	455	5:00 PM	5,440	490	5:00 PM	4,560	410	5:15 PM
Parking Garage (Main entrance/exit)	2,210	225	9:15 AM	2,515	325	9:30 AM	1,680	165	6:00 PM	1,560	135	7:45 AM	2,330	270	3:00 PM	2,165	240	3:00 PM	1,000	80	1:15 PM
SW Washington Way, west of SW 26 <sup>th</sup> St	2,915	280	5:00 PM	2,605	215	5:00 PM	2,935	245	4:45 PM	2,990	285	5:15 PM	3,025	255	5:00 PM	2,960	260	5:00 PM	N/A	N/A	N/A
SW Jefferson Way, east of SW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	2,740	290	5:15 PM	2,105	185	1:30 PM	2,035	180	5:30 PM	2,295	185	3:15 PM	1,675	155	5:15 PM
SW 26 <sup>th</sup> St, south of SW Jefferson Way	N/A	N/A	N/A	N/A	N/A	N/A	2,255	190	3:00 PM	2,065	155	5:00 PM	2,285	170	4:45 PM	1,960	155	5:00 PM	N/A	N/A	N/A
SW Western Blvd, east of SW 26 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	11,470	1,120	5:00 PM	12,235	1,165	5:00 PM	12,190	1,140	4:45 PM	11,435	1,055	5:00 PM	10,675	965	5:00 PM
SW Intramural Ln, east of SW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	370	35	5:45 PM	265	25	6:30 PM	325	30	6:00 PM	320	35	5:30 PM
NW Jackson Ave, west of NW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	565	50	5:15 PM	N/A	N/A	N/A	730	65	4:45 PM	N/A	N/A	N/A
NW Jackson Ave, east of NW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,430	140	5:15 PM	N/A	N/A	N/A	1,480	135	5:15 PM	N/A	N/A	N/A
SW 26 <sup>th</sup> St, north of SW Campus Way	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	630	50	7:30 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW Campus Way, east of SW 26 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	410	40	9:15 AM	N/A	N/A	N/A	N/A	N/A	N/A
SW Jefferson Way, east of SW Waldo Pl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	875	60	5:15 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW May Ave, west of SW 17 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	725	60	8:45 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW A Ave, west of SW 15 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	510	50	1:15 PM	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Tube Count Volumes</b>	<b>44,870<sup>2</sup></b>	<b>4,225<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>42,915<sup>2</sup></b>	<b>3,920<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>49,175<sup>2</sup></b>	<b>4,535<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>49,225<sup>2</sup></b>	<b>4,395<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>50,860<sup>2</sup></b>	<b>4,625<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>50,525<sup>2</sup></b>	<b>4,445<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>44,320<sup>2</sup></b>	<b>3,995<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>

Notes: Shading indicates which year had the highest daily and/or peak hour volume

<sup>1</sup> Rounded to the nearest 5 vehicles

<sup>2</sup> Excluding Parking Garage and any tube locations that have not been counted each of the five years from 2013 to 2018

<sup>3</sup> Reflective of System Peak Hour, Excluding Parking Garage and any tube count locations that have not been counted each of the five years from 2013 to 2018

## ADDITIONAL MONITORING EFFORTS

***LDC Section 3.36.90.b.1 Every three years, OSU shall identify the amount of available parking spaces using City standard parking configurations, and usage within each residential parking district bordering OSU and the number of residential parking permits funded by the University. In addition, OSU will provide details of other efforts undertaken by the University to address neighborhood-parking issues.***

Prior to 2020, Neighborhood parking utilization studies were typically completed every 5-years. In May 2016, Kittelson and Associates, Inc. in conjunction with Quality Counts, issued the *Corvallis On-Street Parking Utilization Study*, a jointly funded and managed project between the City of Corvallis and Oregon State University (OSU) to better understand parking behavior within the neighborhoods surrounding the university and downtown Corvallis. This was a more extensive study of neighborhood parking behavior than is typical for OSU's monitoring obligations.

The most recent neighborhood parking utilization study was conducted in February 2020 and is detailed in the 2020 report. See *Appendix C – Corvallis On-Street Parking Utilization Study*. The 2020 study area included all three of the Residential Parking Districts. Each district was surveyed between 11am and 12pm on Tuesday, February 4. The data collection period was chosen, in consultation with City of Corvallis staff, based on findings from the May 2016 *Corvallis On-Street Parking Utilization Study*, which found the hour of 11AM to 12PM captured the peak measured demand between the hours between 7AM and 7PM, across the more than 7,200 parking spaces in the 2016 study area.

During the Tuesday study hour between 11:00 AM and 12:00 PM, 556 vehicles were observed to be parked along the block-faces within the three permit areas. This equates to an overall utilization of approximately 62 percent. Utilization in Area A was approximately 58 percent, in Area B it was approximately 79 percent, and in Area C it was 47 percent. According to data from the 2016 *Corvallis On-Street Parking Utilization Study*, utilization during this same peak hour was approximately 61 percent in Area A, 80 percent in Area B, and 49 percent in Area C. The measured level of occupancy means that approximately 334 parking spaces (38 percent) were vacant during the study period (123 in Area A, 70 in Area B, and 141 in Area C).

While Oregon State University does not fund Residential Parking District permits, the university recognizes that – as the 2016 *Corvallis On-Street Parking Utilization Study* revealed – there are varying parking impacts in the neighborhoods adjacent to campus. OSU continues to enhance campus infrastructure, operations, and educational programs to encourage students, employees, and visitors to use university parking facilities and to utilize alternative modes of transportation to the greatest extent possible when coming to campus. In 2016, OSU Transportation Services department added a value priced zone to the parking system and created a new full time staff position specifically focused on developing programs and incentives to encourage commuters to take alternate modes to the Corvallis campus. As mentioned in the Transportation Demand Management section of this report, OSU continues to install additional bike parking, contribute funding for local transit services, and manage Beaver Bus routes as further encouragement to use alternative modes of transportation when commuting to campus.

# Appendix A Sector Development Tracking Report

# Campus Master Plan - Sector Detail

## Whole Campus- All Sectors

Area: 24,904,904 Square Feet (SqFt)/572 Acres{100% of campus}

### Existing/Approved Development

Existing Development\*: 8,141,683 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	3,247,716	13.0%
OSU IOTB** Footprint	90,930	0.4%
Non OSU Building Footprint	213,286	0.9%
Non OSU IOTB Footprint	18,058	0.1%
OSU Streets***	1,124,808	4.5%
OSU Parking***	3,142,321	12.6%
Public Streets	399,322	1.6%
<b>Total Existing Impervious Surface</b>	<b>8,236,441</b>	<b>33.1%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

#### Structures

	GSF	% Total
Maximum Future Allocation	3,155,000	100%
Development since 12/2004	1,245,290	39%
Remaining Development Allocation	1,909,710	61%

#### Open Space

	SqFt	% Sector
Existing Open Space	16,668,463	67%
New Development Total Footprint	315,011	1%
Open Space After Development	16,353,452	66%
Minimum Future Open Space	12,452,452	50%
Remaining Open Space Development	3,901,000	16%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Dec-2021	Sector C	546,022	141,580	-198,391	-56,811	Sector Aggregate
Aug-2021	Sector F	253,534	10,535	-41,946	-31,411	Sector Aggregate
Jun-2021	Sector B	70,374	1,719	128,630	130,349	Sector Aggregate
Apr-2021	Sector E	118,961	77,965	40,450	118,415	Sector Aggregate
Jun-2020	Sector G	185,079	43,040	28,356	71,396	Sector Aggregate
Mar-2020	Sector H	5,274	5,274	-45,490	-40,216	Sector Aggregate
Nov-2019	Sector A	-5,936	28,852	78,812	107,664	Sector Aggregate

## Campus Master Plan - Sector Detail

Apr-2019	Sector D	74,082	17,472	-162	17,310	Sector Aggregate
Mar-2010	Sector J	-2,100	-1,685	0	-1,685	Sector Aggregate
<b>Total</b>		<b>1,245,290</b>	<b>324,752</b>	<b>-9,741</b>	<b>315,011</b>	

# Campus Master Plan - Sector Detail

## Sector A- West 35th

Area: 3,358,166 Square Feet (SqFt)/77 Acres{13% of campus}

### Existing/Approved Development

Existing Development\*: 281,551 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	161,080	4.8%
OSU IOTB** Footprint	39,977	1.2%
Non OSU Building Footprint	87,172	2.6%
Non OSU IOTB Footprint	8,715	0.3%
OSU Streets***	93,618	2.8%
OSU Parking***	141,771	4.2%
Public Streets	34,570	1.0%
<b>Total Existing Impervious Surface</b>	<b>566,903</b>	<b>16.9%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004  
 \*\*IOTB=Improvements Other Than Buildings  
 \*\*\*Includes gravel areas

### Development

Structures	GSF	% Total
Maximum Future Allocation	250,000	100%
Development since 12/2004	-5,936	-2%
Remaining Development Allocation	255,936	102%

Open Space	SqFt	% Sector
Existing Open Space	2,791,263	83%
New Development Total Footprint	107,664	3%
Open Space After Development	2,683,599	80%
Minimum Future Open Space	2,619,369	78%
Remaining Open Space Development	64,230	2%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Nov-2019	Washington Way (Sector A) - Reconstruction	0	0	197	197	Roadway and bike facilities constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector A) - Demolition	0	0	-626	-626	Roadway and parking lot removed as part of Washington Way reconstruction project.
Jun-2016	Agriculture Systems Management Center (0366)	10,500	10,500	12,229	22,729	Construction of new Ag Systems Management Building
Feb-2015	Jefferson Street Building (B0089) - Bike Pad	0	0	310	310	Uncovered bike parking; updated 2/26/20 - per LDC 3.36.50.01.e

## Campus Master Plan - Sector Detail

Jun-2013	Sheep Barn (B0346) - Demolition	-14,413	-23,676	-11,415	-35,091	Removal of sheep barn and associated paving; 5/1/14: GSF and FP adjusted to be consistent with original 2005 values
Jun-2013	Wool Lab (B0380) - Demolition	-3,467	-3,514	-200	-3,714	Removal of wool lab and associated parking; 5/5/14: GSF and FP adjusted to be consistent with original 2005 values
May-2013	Beef Barn (B0347) - Demolition	-19,115	19,882	-36,756	-16,874	-36,756 includes -3,000 sf of street; 5/1/14: FP adjusted to be consistent with original 2005 values
May-2013	Hogg Metabolism Barn (B0367)	13,760	13,760	79,218	92,978	79,218 includes 5000 sf of street.
May-2013	River Hydraulics Tank	702	702	0	702	In-ground concrete tank for river hydraulics modeling. Project converts open space to impervious/structure.
Jul-2012	IOTB - 379 - Demolition	-59	-59	0	-59	No clear record of when it was demolished. Appears in Google Earth aerial photo in 11/2011, but gone by 7/2012. Removed from GIS in 2013 update to dataset. Originally part of Non-OSU IOTB; 5/5/14: database update/validation
Jul-2012	Ninv - 109 - Demolition	-38	-38	0	-38	No clear record of when it was demolished. Appears in Google Earth aerial photo in 11/2011, but gone by 7/2012. Removed from GIS in 2013 update to dataset. Originally part of Non-OSU IOTB; 5/5/14: database update/validation
Jul-2012	Rabbitry Solar Panels - solar arrays south of rabbitry builidngs along Campus Way	77	77	0	77	Impervious surface is beneath small transformer
Mar-2010	IOTB - 135 - Demolition	-178	-178	0	-178	Demolished prior to construction of Oldfield Animal Teaching Facility; 5/5/14: database update/validation
Mar-2010	IOTB - 136 - Demolition	-355	-355	0	-355	Demolished between 2005 and 2012; 5/5/14: database update/validation

## Campus Master Plan - Sector Detail

Mar-2010	IOTB - 291 - Demolition	-279	-279	0	-279	Demolished prior to construction of Oldfield Animal Teaching Facility; 5/5/14: database update/validation
Mar-2010	IOTB - 292 - Demolition	-279	-279	0	-279	Demolished prior to construction of Oldfield Animal Teaching Facility; 5/5/14: database update/validation
Mar-2010	IOTB - 293 - Demolition	-335	-335	0	-335	Demolished prior to construction of Oldfield Animal Teaching Facility; 5/5/14: database update/validation
Mar-2010	IOTB - 294 - Demolition	-474	-474	0	-474	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 295 - Demolition	-494	-494	0	-494	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 296 - Demolition	-443	-443	0	-443	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 297 - Demolition	-44	-44	0	-44	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 298 - Demolition	-280	-280	0	-280	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 303 - Demolition	-271	-271	0	-271	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	Ninv - 110 / Non-OSU 33 - Demolition	-99	-99	0	-99	Decomissioned; No clear record of when it was demolished. Not clear from Google Earth imagery, but appears to be gone by 3/2010. Removed from GIS in 2013 update to dataset. Originially part of Non-OSU IOTB; 5/5/14: database update/validation
Mar-2010	Ninv - 118 / EPA 118 - Demolition	-1,433	-1,433	0	-1,433	A portion of building demolished; Google Earth imagery shows it present in 2006, but gone by 3/2010. Removed from GIS in 2013 update to dataset. Originially part of Non-OSU Bld; 5/5/14: database update/validation



## Campus Master Plan - Sector Detail

Mar-2010	Oldfield Animal Teaching Facility (B0364)	17,701	17,701	35,855	53,556	Phase 1 of three-phase development; Development = 17,527 building and 174 generator enclosure (sq ft updated 12/2013 to reflect final construction)
Dec-2009	Beef Pole Barn (B0365)	1,080	1,080	0	1,080	New Pole Barn for Sheep
Mar-2008	Soil Dumpster & Appliances Pad	700	700	0	700	
Mar-2007	Lock stave Building (B0379) - Demolition	-8,400	-3,299	0	-3,299	Date approximate
<b>Total</b>		<b>-5,936</b>	<b>28,852</b>	<b>78,812</b>	<b>107,664</b>	

# Campus Master Plan - Sector Detail

## Sector B- West Campus

Area: 3,129,255 Square Feet (SqFt)/72 Acres{13% of campus}

### Existing/Approved Development

Existing Development\*: 831,426 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	437,205	14.0%
OSU IOTB** Footprint	13,512	0.4%
Non OSU Building Footprint	100,236	3.2%
Non OSU IOTB Footprint	8,117	0.3%
OSU Streets***	129,191	4.1%
OSU Parking***	590,623	18.9%
Public Streets	66,596	2.1%
<b>Total Existing Impervious Surface</b>	<b>1,345,480</b>	<b>43.0%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

#### Structures

	GSF	% Total
Maximum Future Allocation	405,000	100%
Development since 12/2004	70,374	17%
Remaining Development Allocation	334,626	83%

#### Open Space

	SqFt	% Sector
Existing Open Space	1,783,775	57%
New Development Total Footprint	130,349	4%
Open Space After Development	1,653,426	53%
Minimum Future Open Space	1,032,654	33%
Remaining Open Space Development	620,772	20%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Jun-2021	West Greenhouse Door Replacement and Accessibility Improvements	0	0	0	0	No change in GSF / Impervious / Openspace
Dec-2020	Motorpool Canopy Replacement	468	468	0	468	Replacement of the damaged canopy (19.5' x 24')
Dec-2020	Motorpool Canopy Demolition (IOTB-76)	-572	-572	0	-572	Refer to CMP Appendix A -4

## Campus Master Plan - Sector Detail

Sep-2020	Wiegand Hall Pilot Plant Window Replacement	0	0	0	0	Replacement of all windows on all elevations and the roll-up door on the south elevation of the Wiegand Hall Pilot Plant
Mar-2020	Former Black Cultural Center (B0834) - Demolition	-2,098	-1,179	0	-1,179	Demolition of former BCC building that was moved to 3036 SW Orchard Ave. from its former location at 2320 SW Monroe Ave. in 2013.
Nov-2019	Washington Way (Sector B) - Reconstruction	0	0	46,452	46,452	Roadway and bike facilities constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector B) - Demolition	0	0	-28,671	-28,671	Roadway and parking lot driveways removed as part of Washington Way reconstruction project.
Nov-2019	IOTB - Demolition (northwest of Vet Dairy Barn)	-198	-198	0	-198	Small shed, located outside of OSU National Historic District, to be removed with the Washington Way reconstruction project.
Feb-2018	AWP (B0212) Impervious Surface Demolition	0	0	-7,383	-7,383	Pervious Surface Removal
Feb-2018	Wiegand Hall (B0128)	90	90	-106	-16	Chiller installation. New landscape area created from parking lot / impervious surface. 90 sf equipment pad. 106sf new landscape area created from parking lot.
Nov-2017	New Peavy Hall (B0213)	80,691	26,639	0	26,639	Construction of new Peavy Hall. Structure Only. Does not include bicycle parking or vehicle parking
Nov-2017	New Peavy Parking Lot Areas	0	0	14,285	14,285	Does not include pedestrian paving, detention pond or site walls.
Nov-2017	New Peavy Uncovered Bike Parking	0	0	1,284	1,284	Uncovered bike parking for new Peavy Hall. Not included in Peavy GSF / Footprint / parking. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Nov-2017	New Peavy Hall Covered Bike Parking	636	636	0	636	Covered bike parking for New Peavy Hall. Not included in Peavy GSF / footprint / parking.
May-2017	Jefferson Way Expansion with steamline permit	0	0	13,027	13,027	

## Campus Master Plan - Sector Detail

May-2017	Temporary Trailer South of Clark Meat Lab	924	924	0	924	New trailer to be installed as temporary for 6 months. Will be permitted as permanent trailer after 6 months with completion of adjacent parking lot.
May-2017	Office Trailer Removal at Radiation Center (B0098) / EH&S Annex (B0141)	0	-400	0	-400	Office trailer to be removed from gravel lot near Radiation center / EH&S annex
Mar-2017	AWP (0212)	14,938	14,938	45,882	60,820	AWP
Jan-2017	National Forage Seed Center East Lot (3333) - New Construction	0	0	99,296	99,296	Addition includes new parking and drive lanes (96,096 SF) and gravel for hammerhead turnaround (3,200 SF)
Jan-2017	National Forage Seed Center East Lot (3333) - Demolition	0	0	-97,110	-97,110	Removal of existing gravel parking lot (92,642 SF) and hammerhead turnaround (4,468 SF)
Aug-2016	EH&S Emergency Preparedness Improvements - Storage near EH&S Annex (B0141)	480	480	385	865	Improvements consists of 385 sqf of asphalt around three 8' x 20' steel containers (480 gsf); note: pads for steel containers included in structure footprint.
Jun-2016	35th Street Parking Lot (3339)- Expansion	0	0	8,917	8,917	The parking lot will be expanded south to include an additional bay of parking. The project includes 8,917 square feet in parking and 458 square feet in pedestrian improvements. The pedestrian improvements are not included in the total.
Apr-2016	Peavy Hall (B0124) - Demolition	-84,020	-44,209	-18,010	-62,219	Footprint and Parking demolition updated 11/15/17.
Aug-2015	Poultry House G (B0149) - Demolition	-7,040	-8,204	0	-8,204	Demolished to facilitate construction of the Energy Center South Lot (3339). Note: For consistency, GSF and Footprint were pulled from CMP Appendix A, Table B.
Jul-2015	Shad Growth Area (I2401) - Demolition	-819	-819	0	-819	Removed July 8, 2015
Jun-2015	Office Trailer (B0208) - OSU Radiation Center	0	400	0	400	

## Campus Master Plan - Sector Detail

Apr-2015	35th Street Parking Lot (3339)	0	0	31,148	31,148	Asphalt paving 29,945 square feet; Concrete paving 1,203 square feet. Total does not include the pedestrian improvements.
Aug-2014	USDA Building - Concrete Pads/Mechanical Equipment	376	376	0	376	The cement pad on the south side of the building will be 9 1/2' W x 17' L (161.5 sq ft). This will have the AC unit on it. The pad on the west side of the building will be 5' W x 43' long L (215 sq ft). This pad will have the 3 smaller cooling units on it
May-2014	Radiation Center (B0098) - Temporary Trailer	200	200	0	200	Temporary Trailer on new pavement, east of Radiation Center.
Feb-2013	Dryden Hall (B0151) - bike parking improvements	0	0	159	159	New concrete pad for bike parking; Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Aug-2012	Black Cultural Center (B0834) - Installation of relocated building	2,098	1,179	0	1,179	The old BCC building is moved from its existing location in Sector C at 2320 NW Monroe Ave. to a new location in Sector B at 3036 SW orchard Ave.
Aug-2012	IOTB - 266 - Demolition	-637	-637	0	-637	Garage demolished to make room for relocated old BCC building; 5/6/14: database update/validation
Jul-2012	IOTB - 30 - Demolition	-577	-577	0	-577	Formerly part of USDA Forestry Sciences Lab; demolished and replaced with new bldg. entire sq. footage removed. Used Google Earth historic images tab to determine when project was completed. GIS Str_Bldg layer shows the change in 2012.
Jul-2012	USDA Forestry Sciences Lab (B2006)	45,406	-14,501	0	-14,501	Demolition of one wing and replacement with new addition. Difference in footprint sq. footages was -14,501. Lease agreement 102,500 sq. ft. including out buildings; subtracted outbuildings (B0210 and B0209) and total remaining is 98,900 for current gsf.
Sep-2009	Dryden Hall (B0151) - Generator	76	76	0	76	New generator on concrete slab (updated per 0151-580-001 drawing for installation)

## Campus Master Plan - Sector Detail

Jun-2009	Radiation Center High Bay Addition (B0098)	1,600	1,600	308	1,908	
Nov-2007	Vet Dairy Barn Tuff Shed	420	420	0	420	
Aug-2007	EH&S Annex (B0141) - Addition	1,120	1,120	0	1,120	
Feb-2007	Energy Center (B0078)	32,419	32,419	18,767	51,186	
Feb-2007	IOTB - 271 - Correction	-1,764	-1,764	0	-1,764	Included in 2005 at IOTB, but should not have been included because only temporary planting areas (Land Improvement). 5/7/14: Removed GSF and FP in database update.
Feb-2007	IOTB - 276 - Correction	-1,002	-1,002	0	-1,002	Included in 2005 at IOTB, but should not have been included because only temporary planting areas (Land Improvement). 5/7/14: Removed GSF and FP in database update.
Feb-2007	Poultry House F (B0164) - Demolition	-7,165	0	0	0	Slab remains (footprint no change) Demolish for Energy Center
Feb-2007	Poultry House H (B0157) - Demolition	-5,676	-6,184	0	-6,184	Demolished for Energy Center
<b>Total</b>		<b>70,374</b>	<b>1,719</b>	<b>128,630</b>	<b>130,349</b>	

# Campus Master Plan - Sector Detail

## Sector C- Campus Core

Area: 6,863,033 Square Feet (SqFt)/158 Acres{28% of campus}

### Existing/Approved Development

Existing Development\*: 4,685,510 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	1,460,841	21.3%
OSU IOTB** Footprint	5,865	0.1%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	529,326	7.7%
OSU Parking***	829,010	12.1%
Public Streets	57,060	0.8%
<b>Total Existing Impervious Surface</b>	<b>2,882,102</b>	<b>42.0%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004  
 \*\*IOTB=Improvements Other Than Buildings  
 \*\*\*Includes gravel areas

### Development

Structures	GSF	% Total
Maximum Future Allocation	679,000	100%
Development since 12/2004	546,022	80%
Remaining Development Allocation	132,978	20%

Open Space	SqFt	% Sector
Existing Open Space	3,980,931	58%
New Development Total Footprint	-56,811	-1%
Open Space After Development	4,037,742	59%
Minimum Future Open Space	2,470,692	36%
Remaining Open Space Development	1,567,050	23%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Dec-2021	Dixon Recreation Center - Aquatics Improvements	0	0	0	0	Project is within the existing building
Nov-2021	Cordley Hall East Renovation - Demolition	-1,150	0	-1,626	-1,626	Removal of driveway, canopy, and penthouse
Nov-2021	Cordley Hall East Renovation - Reconstruction	1,600	1,400	1,461	2,861	Canopy, penthouse, and loading dock construction
Jul-2021	Rehearsal Classroom Building (Indoor Target Range)	0	0	0	0	Renovation of existing building. Changes to site captured with Arts and Education Complex - Construction

## Campus Master Plan - Sector Detail

Jul-2021	Arts and Education Complex - Construction	65,738	39,743	18,740	58,483	AEC building, two (2) bike shelters, and transformer/generator enclosure, as well as firelane and drop off.
Jul-2021	AEC (Building Permit) - Final Demolition	0	0	-5,114	-5,114	Removal of waterline cap and pavement
Apr-2021	Facilities Services Shops Lot (3208) and impervious surface within FS fences - Demolition	0	0	-89,354	-89,354	Part of AEC - Early Work Package (note: does not include the utility trench patch, which will come out with the next phase of construction)
Apr-2021	Physical Plant Paint (B0051) - Demolition Foundation	0	-4,013	0	-4,013	Part of AEC - Early Work Package
Apr-2021	Physical Plant Material Shed (B0050) - Demolition Foundation	0	-3,758	0	-3,758	Part of AEC - Early Work Package
Apr-2021	Physical Plant Vehicle Shed (B0047) - Demolition Foundation	0	-1,836	0	-1,836	Part of AEC - Early Work Package
Apr-2021	Physical Plant Shops (B0046) - Demolition Foundation	0	-16,100	0	-16,100	Part of AEC - Early Work Package
Apr-2021	Access, Lock and Key Shop (Fr Parking Services Bldg - B0045) - Demolition Foundation	0	-6,880	0	-6,880	Part of AEC - Early Work Package
Apr-2021	Physical Plant Vehicle Shed B (B0044) - Demolition Foundation	0	-1,218	0	-1,218	Part of AEC - Early Work Package
Apr-2021	Physical Plant Vehicle Shed A (B0043) - Demolition Foundation	0	-3,094	0	-3,094	Part of AEC - Early Work Package
Apr-2021	Physical Plant Lube Building (B0042) - Demolition Foundation	0	-499	0	-499	Part of AEC - Early Work Package
Apr-2021	Physical Plant Paint (B0051) - Demolition Bld	-3,800	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Physical Plant Material Shed (B0050) - Demolition Bld	-3,600	0	0	0	Part of OSU Facilities Bldg and Tank Demo; Note: CMP Appendix A plus removal of Oct 2014 addition
Apr-2021	Physical Plant Vehicle Shed (B0047) - Demolition Bld	-1,800	0	0	0	Part of OSU Facilities Bldg and Tank Demo



## Campus Master Plan - Sector Detail

Apr-2021	Physical Plant Shops (B0046) - Demolition Bld	-32,000	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Access, Lock and Key Shop (Fr Parking Services Bldg - B0045) - Demolition Bld	-6,774	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Physical Plant Vehicle Shed B (B0044) - Demolition Bld	-2,900	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Physical Plant Vehicle Shed A (B0043) - Demolition Bld	-2,900	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Physical Plant Lube Building (B0042) - Demolition Bld	-564	0	0	0	Part of OSU Facilities Bldg and Tank Demo
Apr-2021	Community Hall Slope - Construction	1,451	1,451	10,929	12,380	Replacement of bike parking and parking, as well as construction of new transformers, service area, and pull out along Jefferson Way
Apr-2021	Community Hall Slope - Demolition	-683	-683	-14,996	-15,679	Removal of parking lot, vaults, bike parking, etc. in preparation for re-construction
Apr-2021	Fairbanks Hall (B0087) - Renovation	1,832	1,832	0	1,832	East Porch and Stair (615 sf), East Ramp (773 sf), transformer (208 sf) and generator (236 sf)
Apr-2021	Fairbanks Hall (B0087) - Renovation Preparation	-639	-639	0	-639	Demolition of the ADA ramp (252 sf), east porch and portion of the west porch (387 sf)
Apr-2021	Fairbanks West Lot (3301) - Demolition	0	0	-4,483	-4,483	Demolition of the northern section of the parking lot to create a plaza area.
Apr-2021	LiNC (B0023) - Bike Parking	480	480	0	480	Bike Hoops moved from Fairbanks Hall to north and west sides of LiNC (in locations proposed with Classroom Building Alternate 8)
Apr-2021	Fairbanks Hall Renovation (B0087) - Demolition of Bike Parking (moved to LiNC)	-540	-540	0	-540	Bike parking relocated from west side of Fairbanks Hall and southside of Women's Building. Reinstalled at LiNC (separate entry)
Apr-2021	Fairbanks Annex (B0082) - Demolition Phase 2	-1,440	-2,615	0	-2,615	The first part of Fairbanks Annex was demolished April 2013; this second phase is the remaining portion of building. Refer to CMP Appendix A-6.

## Campus Master Plan - Sector Detail

Feb-2021	Poling Hall Exit Door Replacement	0	0	0	0	No change to GSF. Replacement of existing exit door facing breezeway between Poling and Buxton Halls.
Dec-2020	Owen Hall Loading Dock Alterations (egress door, railings, stair modifications)	0	0	0	0	No change to gsf
Dec-2020	Valley Library Antennas & Screening	0	0	0	0	No change to GSF / Ft Print / Parking / Open Space. All improvements are on the rooftop.
Sep-2020	Cordley Hall West Renovation - Building	13,900	400	0	400	Addition of canopy and penthouse construction (added 11/17/21)
Sep-2020	Cordley Hall West Renovation - Building (Demolition of Penthouse)	-6,500	0	0	0	(added 11/17/21)
Sep-2020	Cordley Hall West Renovation - Site Work (Bike Parking and Transformers)	958	958	0	958	Includes new bike parking and transformer pads (updated 11/17/21 - updated transformer)
Sep-2020	Cordley Hall West Renovation - Site Work (new parking area 3315)	0	0	9,600	9,600	New ADA parking, fire lane, and access asile
Sep-2020	Cordley Hall West Renovation - Site Work (Demolition of a portion of Parking Lot 3315 and Shed)	-150	-150	-18,138	-18,288	Removal of parking lot 3315 - to the drive asile connection with parking lot 3316 (updated 11/17/21 - shed removal)
Jul-2020	Weatherford Place - Reconstruction	0	0	-2,447	-2,447	Project included widening the sidewalk on west side of street; the vehicle-rated sidewalk provides ADA and fire access. Street narrowed.
Jun-2020	Poling Steamline Replacement	0	0	0	0	The steamline work will occuring underground. Surface conditions will be replaced following construction of the new steamline.
May-2020	Fire Suppression System Cauthorn Hall (B0114) PIPC work	0	0	48	48	This is a city required vault for PIPC work associated with new fire suppression system in Cauthorn Hall

## Campus Master Plan - Sector Detail

Mar-2020	North District Utility Plant - Site Work (Reconstruction of a portion of Parking Lot 3316)	0	0	6,959	6,959	Construction of 13 parking spaces north of the NDUP
Mar-2020	North District Utility Plant - Site Work (Demolition of a portion of Parking Lot 3316)	0	0	-15,073	-15,073	Removal of the east portion of the Cordley Hall West Lot (3316)
Feb-2020	North District Utility Plant (B0031)	5,816	5,816	0	5,816	New construction of 5,816 building on existing parking lot.
Jan-2020	Poling (B0112) & Cauthorn Hall (B0114) Window Replacement	0	0	0	0	Replacement of all windows on all elevations of Poling and Cauthorn Halls.
Nov-2019	Washington Way (Sector C) - Reconstruction	0	0	94,369	94,369	Roadway, bike facilities, and parking lots constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector C) - Demolition	0	0	-98,622	-98,622	Roadway, bike facilities, and parking lots removed as part of Washington Way reconstruction project.
Nov-2019	Navy ROTC Armory (0117) - Demolition	-13,664	-10,289	0	-10,289	Building demolished as part of the Washington Way Reconstruction
Jan-2019	Langton Hall (B0105)	0	0	0	0	Handrail Installation at north entries. No change in GSF or Open space
Oct-2018	Goss Stadium (B0108) Flagpoles	0	0	0	0	2 new flagpoles installed near existing flagpoles at Goss Stadium
Aug-2018	Art - Fosbury Flop	370	370	0	370	Installation of art work in an existing landscape bed (370 sq ft); includes a sidewalk (90 sf) which is a pedestrian facility.
Jun-2018	Snell Hall (B0100) Window AC Units - 5th Floor (CAPS offices)	0	0	0	0	Installation of window air conditioning units in existing window openings.
May-2018	Burt Hall (B0068) re-roofing	0	0	0	0	No change to sector development
May-2018	Graf Hall (B0006) Transformer Landscape	32	188	0	188	Transformer footprint 32sf, pad area total 188sf (68sf in open space, 120sf in parking area)
May-2018	Graf Hall (B0006) Transformer Parking Removal	0	0	-120	-120	removal of parking impervious surface for transformer installation at Graff

## Campus Master Plan - Sector Detail

Apr-2018	Einerson House Remodel (Old APCC) (B0827)	0	0	0	0	No change in parking impervious. Existing space to be resurfaced. New walkway. No change in Open Space or GSF/Footprint
Apr-2018	Goss Stadium (B0108) Omaha Room and Bullpen	3,152	3,152	0	3,152	Omaha room alterations no change in GSF. All new GSF/Footprint is Balcony Bullpen
Mar-2018	Gilbert Hall (B0015) and Gilbert Hall Addition (B0012) - Renovation	0	0	0	0	Project involves rooftop mechanical equipment
Feb-2018	Snell Hall (B0100) - School of Arts & Communication Renovation	112	112	0	112	Concrete pad for mechanical equipment
Jan-2017	26th Street and Washington Way Steamline Replacement	0	0	0	0	All project work is below an existing street and parking lot.
Oct-2016	Merryfield Hall (B0002) South Wing Additon and Mechanical	282	200	0	200	Elevator and stair addition provide 282 new GSF. New pavement for mechanical equipment on east elevation adds 200 sf impervious footprint.
Jul-2016	Pocket Park - Project Placed on Hold	0	0	9,135	9,135	Impervious surface added back into SDT because project was put on long-term hold. 8/2/2017
Jul-2016	Pocket Park - Permitting	0	0	-9,135	-9,135	SDT Assessment - Area of the paved surface to be removed and landscaped. Note: the access drive (3,150 SF) is not included in this amount, as it's a replacement of existing impervious surface. Other changes captured March 2014
May-2016	West Dining Hall (B0113) Trash Compactor and Loading Dock	233	233	0	233	Replacement trash compactor and new loading dock covered area installed at Marketplace West Dining Center. All development in area of existing impervious surface. No change in parking or open space.
Aug-2015	Snell Hall (B0100) - Removal of non-code compliant bike parking	0	0	-469	-469	Removal of the four (7'x19', 7'x8', 7'x25', and 7'x15') non-code compliant bike pads on the north side of Snell Hall, between sidewalk and Jefferson Way. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e

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Jul-2015	Heckart Lodge (B0116) - Access Improvements	0	0	-100	-100	Removal of the existing bike pad which is approximately 6' x 16'-9" (100.5 sq. ft); Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jun-2015	Milne Computer Center (B0020) - Bike Pad	0	0	200	200	Project involves infilling an unpaved area that currently has a couple has loose bike racks. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jun-2015	Milam Hall (B0081) - Bike Pad	0	0	183	183	Project involves infilling an old plant bed (no existing plants or irrigation) to accommodate additional bike parking. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jun-2015	Kearney Hall (B0001) - Bike Pad	0	0	78	78	Project involves extending the paved area to accommodate additional bike racks. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jun-2015	Bates Hall (B0069) - Bike Pad	0	0	0	0	Project involves removing an existing bike rack and repouring the same area in concrete (16 sq. ft.). No increase in impermeable surface.
Apr-2015	Milam Hall (B0081) - Generator Enclosure	602	602	0	602	Generator footprint is 126 square feet; generator enclosure is approximately 21'-6"x28"
Mar-2015	Starter Shed Demolition	-113	-113	0	-113	Removal of the started shed greenhouse
Jan-2015	Pharmacy (B0030) - Walkway / Stair removal	0	0	-110	-110	Stairway and asphalt walkway removed for installation of new generator
Jan-2015	Pharmacy (B0030) - Generator	133	402	0	402	New generator (133 sq.ft.) on concrete slab (402 sq.ft.)
Oct-2014	Shops Generator Pole Barn (Extension to north of B0050: Physical Plant Material Shed)	1,200	1,200	0	1,200	Pole barn to house small generators. Built within existing Shops Complex.
Sep-2014	15th Street - New alignment from south of railroad to Washington Ave	0	0	21,384	21,384	New curb-to-curb segment

## Campus Master Plan - Sector Detail

Sep-2014	Washington Way - New alignment between Benton Place and 15th Street	0	0	15,478	15,478	New curb-to-curb segment
May-2014	Bell Tower (B0146)	0	0	0	0	Addition to bellow tower to accommodate new bells. The existing tower is 70' tall. The addition adds 10', vertically. No expansion of footprint or additional GSF.
Mar-2014	Key Shop (B0049) - Demolition	-2,536	-2,536	0	-2,536	Demolished during Washington Way realignment project
Mar-2014	Physical Plant Freight (B0048) - Demolition	-1,434	-1,434	0	-1,434	Demolished during Washington Way realignment project
Mar-2014	Physical Plant Stores (B0052) - Demolition	-26,960	-17,285	0	-17,285	Demolished during Washington Way realignment project
Mar-2014	Physical Plant Warehouse (B0055) - Demolition	-6,574	-6,574	0	-6,574	Demolished during Washington Way realignment project
Mar-2014	15th Street - Demolition from south of railroad to Washington Ave	0	0	-13,782	-13,782	Entire street segment removed to realign road north of railroad right-of-way; included because city streets included in existing development calculation 2004
Mar-2014	Facilities Services Shops Lot (P3208) - Demo part of lot	0	0	-10,145	-10,145	Demolished southern drives and southwest staging area as part of the Washington Way realignment project
Mar-2014	Washington Way - Demolition between Benton Place and 15th Street	0	0	-13,678	-13,678	Entire street segment removed to realign road north of railroad right-of-way; included because OSU Streets included in existing development calculation 2004
Feb-2014	Johnson Hall (B0008) - Demolition	0	0	-44,016	-44,016	Demolition includes the removal of 3,780 square feet Park Terrace (including parking lot 3240) and 40,236 square feet of the Park Terrace East Lot (Lot 3234)

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Feb-2014	Johnson Hall (B0008) - New Construction	65,670	25,759	3,456	29,215	GSF = (Building: 63,348, Utility Enclosure: 1,872, and Bike Shelter: 450); Structure Footprint = (Building: 23,437, Utility Enclosure: 1,872, and Bike Shelter: 450); Parking = replacement parking on north side of building 3,456
Jan-2014	MU Plaza Canopy (I2499)	8,800	8,800	0	8,800	Although the canopy provides a pedestrian amenity/open space, Development Services interprets LDC 3.36.40.01.a as including pedestrian amenities and open space in sector development allocation.
Dec-2013	Green Shed - Demolition	-128	-128	0	-128	Shed demolished with construction of the Classroom Building
Dec-2013	Goss Stadium Expansion 2013 (B0108)	7,500	3,500	0	3,500	
Nov-2013	Strand Agriculture Renovation (B0038)	-786	-786	0	-786	removal of storage additions reduces building footprint
Aug-2013	CEOAS (B0807) - Fire Escape Removal	0	0	0	0	Removal of fire escape and replacement of existing door with a window. No change to impervious surfaces on site or square footage of the building.
Jul-2013	Classroom Building (B0023) - Bike Parking Not Installed (Alternate 8)	-480	-480	0	-480	Racks on the west and north of LiNC not installed with original construction
May-2013	Classroom Building (B0023)	134,957	33,220	10,900	44,120	GSF of the Building 134,957 which includes 126,367 building and 8,590 sqft of mechanical platforms; ~10,900 for the parking lots; ~11,200 for the rest of the service drive; Only included parking lot sqft because service drive is replacing existing drive
May-2013	Student Experience Center (B0039)	87,900	18,000	-384	17,616	New structure built on existing parking lot. Structure footprint is on parking lot, additional impervious surface totals 384 sf. 32,344-31,960 = -384
Apr-2013	Fairbanks Annex (B0082) - Demolition	-600	-600	0	-600	

## Campus Master Plan - Sector Detail

Mar-2013	Gilkey Hall (B0037) - Fire Escape Removal	0	0	0	0	Removal of fire escape. It is in disrepair and no longer needed to meet current code.
Dec-2012	Moreland Hall (B0106) - ADA Ramp Replacement Southern Entrance	0	0	0	0	Old ADA ramp = 213 sq ft New ADA ramp = 311 sq ft All of the new ramp square footage installed over existing impervious surface. The paved accessway to new ramp installed over existing impervious surface and 138 sq ft of landscaped area; however, pedes
Nov-2012	Waldo Hall (B0102) - ADA Parking West side of Building	0	0	5,040	5,040	Increase in impervious surface to create additional ADA parking between Waldo and Langton Hall
Aug-2012	Black Cultural Center (B0834) - removal	-2,098	-1,179	-10,633	-11,812	The old BCC building is moved from its existing location in Sector C at 2320 NW Monroe Ave. to a new location in Sector B at 3036 SW orchard Ave. Parking spaces removed from Park Terrace Street East Lot (Lot 3233).
Aug-2012	Austin Hall Business Center (B0090)	100,000	25,000	1,000	26,000	New Construction of Austin Hall Business Center
Aug-2012	Black Cultural Center (B0835) - New Construction	3,462	3,462	0	3,462	Construction of new Black Cultural Center at the southwest corner of Memorial Place and Monroe Ave.
Jul-2012	Plageman Student Health Center (B0062) - ADA Access Improvements	0	0	0	0	Construct new ADA compliant entrance on north side of Plageman Hall. Install ADA parking in lot # 3233 Park Terrace St East Lot. Install ADA compliant path of travel from parking lot to new entrance.
Jul-2012	Withycombe Hall (B0075) - ADA Access Improvements	0	0	0	0	Replacement of north entrance door for ADA compliance; installation of 2 ADA compliant ramps and path of travel between door and north adjacent parking lot; ADA parking lot improvements in lot #3316 Orchard Ave. South Lot



## Campus Master Plan - Sector Detail

Jul-2012	Asian & Pacific Cultural Center (B0826)	3,894	3,894	0	3,894	Construct new APCC building at southeast corner of Women's Building Field. No new parking/impervious is proposed with this project. Two existing parking spaces in the Fairbanks Hall West Parking lot #3301 will be converted to one new ADA space. Gross Oc
Aug-2011	Outdoor Rec Maintenance Pavilion (B0171)	1,491	3,912	0	3,912	Constructed as part of Student Legacy Park; building foot print is larger than GSF because only a portion of the building is enclosed. The other is a covered seating area. 5/21/14
Aug-2011	Student Legacy Park South Lot (3293)	0	0	-25,848	-25,848	Parking lot reconstructed as part of Student Legacy Park; A portion of the parking area converted to tennis courts, and a small lot constructed east of the indoor tennis facility. Difference added 5/21/14
Jun-2011	Waldo Hall (B0102) - ADA Parking East side of Building	0	0	426	426	new parking 426 sf (the 1,315 sidewalks not included)
May-2011	Bike Shelters - Covered	2,250	2,250	0	2,250	New covered bike shelter at Bexel, Nash, Milam, Plageman, and Gilmore Halls. Each shelter is 450 square feet. 5/21/14: GSF and SFP updated and corrected as it previously included pedestrian improvements (sidewalks).
Mar-2011	Merryfield Hall (B0002) - screening wall, concrete pad	235	235	0	235	New air condensers at Merryfield Hall require concrete pad, screening wall
Feb-2011	Bike parking on North side of Milam Hall (B0081) (replacement)	0	0	354	354	New ADA ramp includes removal and re-installation of replacement bike racks. Replacement bike parking = 354 sf. New ADA ramp paving = 678 sf; however, this is not included in Open Space calculation per LDC 3.36.40.02.a.Updated 2/26/20 from GSF to Imperv
Feb-2011	Bike parking on North side of Milam Hall (B0081) (removal)	0	0	-270	-270	New ADA ramp includes removal and re-installation of replacement bike racks. Existing bike parking removed=270 sf. Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jan-2011	Poling Hall (B0112) and Cauthorn Hall (B0114)- new ADA parking	0	0	1,000	1,000	New parking spaces created from landscaped area between buildings and Intramural Way

## Campus Master Plan - Sector Detail

Jan-2011	Poling Hall (B0112) and Cauthorn Hall (B0114)- new access ramp on south side of building	0	0	0	0	140 Sf of existing walk and stairs to be demolished and 645 Sf of new ramp and stairs to be installed; however, this is not included in Open Space calculation per LDC 3.36.40.02.a.
Aug-2010	Native American Cultural Center (B0085) and removal of Quonset hut (B0107)	1,180	1,180	-3,749	-2,569	Removing existing Quonset hut and parking lot and constructing new building. Net increase in existing open space.
May-2010	ALS (B0079) Nitrogen Storage Tank and concrete pad	162	162	0	162	ALS storage tank, concrete pad, and screening
Dec-2009	Plageman Student Health Center (B0062) - Generator	270	270	0	270	New Generator and Bike Racks
Dec-2009	McAlexander Field House (B0053)	0	0	239	239	Interior / Parking Alterations
Dec-2009	Hallie Ford Building (B0077)	27,262	7,453	0	7,453	New building; 5/21/14: GSF, FP pulled from AiM.
Dec-2009	Hallie Ford Building (B0077) - Demolition	0	0	-15,444	-15,444	Removal of parking lot for the construction of a new building; 5/21/14: FP for Bates S Lot (3314) pulled from GIS
Oct-2009	Green Shed	128	128	0	128	Green Roof tool shed for compost area
Aug-2009	Kerr Admin Bldg (B0061) - Replacement ADA Ramp	0	0	0	0	Replacement non-compliant ADA ramp on south of Kerr Admin Bldg
Aug-2009	Nash Hall (B0021) - General Improvements	375	375	0	375	Generator Footprint
Jul-2009	Reed Lodge (B0118) - Remodel	0	0	922	922	
Jun-2009	Heckart Lodge (B0116) - Renovation	0	0	1,141	1,141	Renovation- no new GSF
May-2009	Furman (Education) Hall (B0028) - Seismic Upgrade	0	0	0	0	Voluntary Seismic Upgrade
Mar-2009	Linus Pauling Science Center (B0071)	102,000	22,444	-16,030	6,414	Structure to be built on existing Parking Lot/Some current parking Lot converted to open space
May-2008	14th/15th Street Improvements (1 of 2)	0	0	2,333	2,333	Split into 2 parts Sector C & D

# Campus Master Plan - Sector Detail

Aug-2007	Goss Stadium Expansion (B0108)	21,408	6,426	0	6,426
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<b>Total</b>	<b>546,022</b>	<b>141,580</b>	<b>-198,391</b>	<b>-56,811</b>
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# Campus Master Plan - Sector Detail

## Sector D- Lower Campus

Area: 1,953,994 Square Feet (SqFt)/45 Acres{8% of campus}

### Existing/Approved Development

Existing Development\*: 325,506 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	117,617	6.0%
OSU IOTB** Footprint	2,553	0.1%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	135,633	6.9%
OSU Parking***	326,634	16.7%
Public Streets	103,905	5.3%
<b>Total Existing Impervious Surface</b>	<b>686,342</b>	<b>35.1%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004  
 \*\*IOTB=Improvements Other Than Buildings  
 \*\*\*Includes gravel areas

### Development

Structures	GSF	% Total
Maximum Future Allocation	201,000	100%
Development since 12/2004	74,082	37%
Remaining Development Allocation	126,918	63%

Open Space	SqFt	% Sector
Existing Open Space	1,267,652	65%
New Development Total Footprint	17,310	1%
Open Space After Development	1,250,342	64%
Minimum Future Open Space	1,191,936	61%
Remaining Open Space Development	58,406	3%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Apr-2019	Wilson Hall (B0191)	0	0	0	0	Project includes roof and an addition of a guardrail
Jun-2018	McNary (B0190) Generator	356	356	0	356	Concrete pad for generator to be installed in existing landscape area at McNary Hall.
Jun-2017	Sunflower House (B0860) - Demolition	-3,620	-3,311	0	-3,311	

## Campus Master Plan - Sector Detail

Jun-2016	14th Street - new bike parking near bus stop	0	0	48	48	Joint project between OSU and City of Corvallis to add an additional bike parking rack near the Lower Campus bus stop; Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Mar-2016	Campus Entrance Station / Information Booth (B0032) - Demolition	-159	-70	0	-70	Demolished with the repavement of the parking lot in 2016 (added to SDT in 1/18/2018)
Dec-2015	Student Community Center (Azalea House (B0026) and Avery Lodge (B0194)) - Alley Improvement	0	0	-51	-51	Existing gravel alley and parking area = 15,022 SF; Proposed improved alley and parking area = 14,971 SF; Net change = 14,971 SF-15,022 SF = -51 SF
Nov-2015	Student Community Center - Azalea House (B0026) and Avery Lodge (B0194) accessory development	0	0	395	395	Azalea Bike Parking = 9' x 10' = 90 SF; Azalea trash = 4' x 11' = 44 SF; Avery new bike parking = 6' x 7' = 42 SF; Avery trash = 4'3" x 12' = 51 SF; Alley Trash enclosure = 12'5" x 13'6" = 167.67 SF Total SF = 395 SF; Updated 2/26/20 from GSF to Impervious
May-2015	Oxford House (B0220)	321	107	0	107	New elevator shaft at Oxford House.
Feb-2015	Student Community Center - Renovation of Azalea House (B0026) and Avery Lodge (B0194)	225	75	0	75	75 sq ft added to Avery footprint for addition of elevator. Repaving existing gravel parking area off of alley, but no net increase of impervious.
May-2013	Parking Lot 3203 and portion of Adams Ave - Removal for the construction of Tebeau Hall (B0189)	0	0	-73,113	-73,113	
May-2013	Tebeau Hall (aka New Residence Hall) (B0189)	76,379	19,735	0	19,735	
Dec-2008	Washington Ave Southwest Lot (3201) - expansion	0	0	26,000	26,000	New parking lot
Dec-2008	Washington Ave and 11th Street Southeast Lot (3227)	0	0	34,278	34,278	New parking lot
May-2008	14th/15th Street Improvements (2 of 2)	0	0	12,281	12,281	Split into 2 parts Sector C & D

# Campus Master Plan - Sector Detail

Nov-2007	Bike Pad - McNary Dining (B0193) & Wilson Hall (B0191)	580	580	0	580
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<b>Total</b>	<b>74,082</b>	<b>17,472</b>	<b>-162</b>	<b>17,310</b>
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# Campus Master Plan - Sector Detail

## Sector E- Southwest Campus

Area: 2,870,819 Square Feet (SqFt)/66 Acres{12% of campus}

### Existing/Approved Development

Existing Development\*: 253,046 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	209,499	7.3%
OSU IOTB** Footprint	10,860	0.4%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	39,718	1.4%
OSU Parking***	244,339	8.5%
Public Streets	30,977	1.1%
<b>Total Existing Impervious Surface</b>	<b>535,393</b>	<b>18.6%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

#### Structures

	GSF	% Total
Maximum Future Allocation	120,000	100%
Development since 12/2004	118,961	99%
Remaining Development Allocation	1,039	1%

#### Open Space

	SqFt	% Sector
Existing Open Space	2,335,426	81%
New Development Total Footprint	118,415	4%
Open Space After Development	2,217,011	77%
Minimum Future Open Space	2,210,531	77%
Remaining Open Space Development	6,480	0%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Apr-2021	Pacific Power - Magruder Vault	49	84	0	84	Concurrent with Washington Way project; added spring 2021
Apr-2020	Campus Operations Center Shops Building (B0864) -Demolition of portion of parking lot (#3370)	0	0	-6,015	-6,015	Portion of existing lot (3370) will be removed and redeveloped to current parking lot standards with new construction of Campus Operations Shops Building.
Apr-2020	Campus Operations Western Shops - Equipment Shed #4	1,395	1,395	0	1,395	Construction of equipment storage shed as part of Campus Ops/Western Shops Complex; under separate building permit

## Campus Master Plan - Sector Detail

Apr-2020	Campus Operations Western Shops - Equipment Shed #3	1,627	1,627	0	1,627	Construction of equipment storage shed as part of Campus Ops/Western Shops Complex. Includes tool wash and trash enclosure. Under separate building permit.
Apr-2020	Campus Operations Western Shops - Equipment Shed #2	3,125	3,125	0	3,125	Construction of equipment storage shed as part of Campus Ops/Western Shops Complex. Includes Fuel Station. Under separate building permit.
Apr-2020	Campus Operations Western Shops - Equipment Shed #1	1,470	1,470	0	1,470	Construction of equipment storage shed as part of Campus Ops/Western Shops Complex. Under separate building permit.
Apr-2020	Campus Operations Western Shops - Lube Shop (B0868)	1,275	1,275	0	1,275	Construction of Lube shop as part of Campus Ops/Western Shops Complex. Under separate building permit.
Apr-2020	Campus Operations Western Shops - Boiler Building (B0869)	540	540	0	540	Construction of Boiler Building for new Campus Ops/Western Shops Complex. Under separate building permit.
Apr-2020	Campus Operations Center Shops Building (B0864) - Phase 1 & 2	59,686	31,095	38,820	69,915	Phase I - foundation permit submitted December 2019. Phase 2 - New shops building = 58,421 GSF & 29,830 footprint; 2 Bike Parking Structures @ 310 SF each; Generator pad = 343 SF; Transformer pad = 302 SF; Parking and vehicle maneuvering areas = 38,820 SF
Nov-2019	Washington Way (Sector E) - Reconstruction	0	0	11,869	11,869	Roadway and bike facilities constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector E) - Demolition	0	0	-19,467	-19,467	Roadway and bike facilities removed as part of Washington Way reconstruction project.
May-2019	Campus Operations Center /Foundation Building Remodel (B0865)	0	0	0	0	No change in GSF or Open space. Interior alterations, some sidewalk changes, no new GSF or Open Space
Mar-2018	Magruder Hall (B0153) - Addition and Renovation	21,599	15,669	21,524	37,193	The project includes four (4) new bike racks, building additions, and a new parking lot. Since the LINAC is partially constructed under a second-story only section of the building, the SF number only represents the new areas.



## Campus Master Plan - Sector Detail

Mar-2018	Magruder Hall (B0153) - Parking Lot demolition	0	0	-20,081	-20,081	Removal of two existing bike parking area (-271) and the existing parking area on the northeast side of the building (-19,810) in preparation of the building renovation/expansion; Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Jul-2015	OC Feed Station (I2481) - Demolition	-147	-147	0	-147	
Jul-2015	Fiberglass Shed Storage (I2444) - Demolition	-227	-227	0	-227	
Mar-2010	IOTB - 55 - Demolition	-144	-144	0	-144	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	IOTB - 56 - Demolition	-144	-144	0	-144	Demolished between 2005 and 2012; 5/5/14: database update/validation
Mar-2010	Oak Creek Building (B0545) - Electrical Repair	36	36	0	36	Increase size of existing 64 sf concrete pad by 36 square feet. New pad total size = 100 sf
Mar-2009	College of Veterinary Medicine Pole Barn (B0158)	960	960	0	960	
Nov-2007	UHDS Svc Bldg Storage Facility	48	48	0	48	
Mar-2007	Magruder Hall (B0153) - Large Animal Vet Med Hospital	27,813	21,303	13,800	35,103	updated 8/13/08 (Larrie Easterly)
<b>Total</b>		<b>118,961</b>	<b>77,965</b>	<b>40,450</b>	<b>118,415</b>	

# Campus Master Plan - Sector Detail

## Sector F- Reser Stadium and Gill Coliseum

Area: 2,062,341 Square Feet (SqFt)/47 Acres{8% of campus}

### Existing/Approved Development

Existing Development\*: 847,166 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	555,220	26.9%
OSU IOTB** Footprint	1,709	0.1%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	134,334	6.5%
OSU Parking***	610,702	29.6%
Public Streets	408	0.0%
<b>Total Existing Impervious Surface</b>	<b>1,302,373</b>	<b>63.2%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

Structures	GSF	% Total
Maximum Future Allocation	750,000	100%
Development since 12/2004	253,534	34%
Remaining Development Allocation	496,466	66%

Open Space	SqFt	% Sector
Existing Open Space	759,968	37%
New Development Total Footprint	-31,411	-2%
Open Space After Development	791,379	38%
Minimum Future Open Space	412,468	20%
Remaining Open Space Development	378,911	18%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Aug-2021	Reser Stadium - West Renovation - Wellness Clinic	31,628	7,124	8,678	15,802	Includes the new clinic, impervious surfaces, and changes to the LaSells Stewart Center West Lot (3277)
Aug-2021	Reser Stadium (0120) - West Side Renovation	209,006	60,607	21,585	82,192	Includes new grandstand and changes to portions of Reser Stadium Lot (3281)
Aug-2021	Reser Stadium - West Side Renovation - Demolition of Lot 3277	0	0	-18,484	-18,484	Demolition of portion of LaSells Stewart Center West Lot (3277)

## Campus Master Plan - Sector Detail

Aug-2021	Reser Stadium (0120) - West Side Renovation (Demolition)	-153,566	-103,461	-33,087	-136,548	Includes demolition of the grand stand and portions of Reser Stadium Lot (3281)
Nov-2019	Washington Way (Sector F) - Reconstruction	0	0	19,591	19,591	Roadway and bike facilities constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector F) - Demolition	0	0	-36,193	-36,193	Roadway and bike facilities removed as part of Washington Way reconstruction project.
Aug-2019	Gill Coliseum (B0121) Signs and Brackets	0	0	0	0	No Change to GSF, parking or open space.
Jul-2019	Sports Performance Center (B0156) Ramp	682	682	0	682	New ramp on the west side of the SPC, accessing new doors. Ramp is 27.5" above grade.
Jun-2019	Gill Coliseum (B0121) Improvements - stair resurfacing, handrail replacements	0	0	0	0	No change in GSF or Open space
May-2019	Gill Coliseum (B0121) Plaza : ramp railing replacement, ramp repair, tree wells, landscape railings	0	0	0	0	No change in GSF or Open Space
Jul-2015	Valley Football Center / North End Zone Renovation (B0143)	38,149	2,724	-2,052	672	New development includes total 38,149 new GSF; 24,014 sf footprint on top of existing impervious; a new building entrance (2,724 sf) in an area of pedestrian open space; and conversion of twelve (12) vehicle parking spaces to a pedestrian walkway (-2,052
Jan-2014	Gill Coliseum (B0121) - Hardscape Improvements	0	0	0	0	Improvements are to open space areas. No changes in total open space, gross square footage, structure footprint, or parking-impervious surface.
Nov-2013	Samaritan Sports Medicine Center (B2063)	17,450	8,725	-9,534	-809	Development occurs in existing parking lot. Reduction in impervious surface is new openspace (walkways, patio and green space).
Dec-2011	Sports Performance Center (B0156) - Basketball Practice Facility	44,974	15,600	7,550	23,150	Includes practice area, locker rooms, conference room and office space; 5/21/14: GSF updated

## Campus Master Plan - Sector Detail

Mar-2010	IOTB - 157 - Demolition	-564	-564	0	-564	Demolished between 2005 and 2012; 5/21/14: database update/validation
Apr-2007	Gill Annex	31,593	20,583	0	20,583	
Feb-2007	Reser (0125-A) - Demolition for Phase II (South Stands)	-612	-612	0	-612	Removal of old ticket booths; 5/21/14: database update/validation
Feb-2007	Reser (0125-B) - Demolition for Phase II (South Stands)	-873	-873	0	-873	Removal of old ticket booths; 5/21/14: database update/validation
Feb-2007	Reser (B0120) - Phase II (South Stands)	35,667	0	0	0	Expansion above existing parking lot.
<b>Total</b>		<b>253,534</b>	<b>10,535</b>	<b>-41,946</b>	<b>-31,411</b>	

# Campus Master Plan - Sector Detail

## Sector G- LaSells and Alumni Center

Area: 1,360,414 Square Feet (SqFt)/31 Acres{5% of campus}

### Existing/Approved Development

Existing Development\*: 742,092 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	268,531	19.7%
OSU IOTB** Footprint	3,931	0.3%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	62,988	4.6%
OSU Parking***	169,354	12.4%
Public Streets	59,146	4.3%
<b>Total Existing Impervious Surface</b>	<b>563,950</b>	<b>41.5%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

#### Structures

	GSF	% Total
Maximum Future Allocation	350,000	100%
Development since 12/2004	185,079	53%
Remaining Development Allocation	164,921	47%

#### Open Space

	SqFt	% Sector
Existing Open Space	796,464	59%
New Development Total Footprint	71,396	5%
Open Space After Development	725,068	53%
Minimum Future Open Space	544,166	40%
Remaining Open Space Development	180,902	13%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Jun-2020	Industrial Building Annex (B0059) - Demolition	-3,240	-3,404	0	-3,404	Reference CMP A-13
Nov-2019	Washington Way (Sector G) - Reconstruction	0	0	11,443	11,443	Roadway and bike facilities constructed as part of Washington Way reconstruction project.
Nov-2019	Washington Way (Sector G) - Demolition	0	0	-19,935	-19,935	Roadway and bike facilities removed as part of Washington Way reconstruction project.
Oct-2019	Cascade Hall (B0058) Interior Remodel	0	0	0	0	No Change in GSF or Open Space

## Campus Master Plan - Sector Detail

Apr-2019	Finley Hall (B0196) - Reroof	0	0	0	0	Project includes roofing and addition of a guardrail
Feb-2018	Finley Hall (B0196) - Demolition of parking area for trash enclosure	0	0	-26	-26	
Feb-2018	Finley Hall Renovation (B0196)	925	925	0	925	Includes Trash Enclosure (26 sf) and Equipment Pad and Screening (925 sf); bike parking is on existing impervious surface and the new walk (77 sf) is not included.
Dec-2016	16th and A Ave Lot (3296)	0	0	30,744	30,744	Roadway Improvements and building demolitions in separate entries
Dec-2016	A Ave Improvements - Constructed with 16th and A Parking Lot (3296)	0	0	2,655	2,655	Removal of existing roadway (-4,780 sf); Construction of roadway improvements (7,435 sf)
Dec-2016	Wallace House Garage and Driveway (B0855) - Demolition	-248	-599	-833	-1,432	OSU acquired garage with the house on 2/6/2007, and it appears it was not added into the Sector Development Tracking report. Driveway = 693 sf, concrete pad - 140 sf.
Dec-2016	Wallace House (B0854) (aka - Sustainability House) - Demolition	-1,409	-872	0	-872	OSU acquired the house on 2/6/2007, and it appears it was not added into the Sector Development Tracking report. Parking and garage separate entry.
Mar-2015	Cascade Hall (B0058) - Renovation Phase I	0	0	1,775	1,775	Installation of bike parking on the north side adjacent to multi-use path (1715) and installation of vehicle surface on the south side (60). Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e
Mar-2015	Cascade Hall (B0058) - Demolition of loading dock and conversion of drive area to ADA path	0	0	-1,343	-1,343	Removal of portion of loading dock on south façade (-527), and conversion of driveline to sidewalk (-816) as part of the Cascade Hall renovation phase I
Mar-2015	Cascade Hall (B0058) - Demolition of bike storage area on south side of building	0	0	-60	-60	Removal of bike storage area as part of the Cascade Hall renovation phase I; Updated 2/26/20 from GSF to Impervious - per LDC 3.36.50.01.e

## Campus Master Plan - Sector Detail

Feb-2015	LaSells Stewart Center East Lot (3259)	0	0	15,255	15,255	Impervious surface includes new asphalt minus islands and existing driveway. New impervious 15,420; New pervious: 195 (sidewalk ramp reconfiguration); NET increase = 15,255 SF
Feb-2013	Cezar Chavez Cultural Center (B0814)	3,256	3,256	0	3,256	There is no parking proposed with this project. The only development sq footage is the foot print of the proposed structure.
Feb-2013	Cezar Chavez Cultural Center (B0813) - Demolition	-1,200	-1,200	0	-1,200	The old house that served as the CCCC will be removed prior to development of the new CCCC building.
Nov-2012	Beth Ray Center for Academic Support (B0206)	33,813	12,535	0	12,535	Construction of building; 5/21/14: Added
Nov-2012	Beth Ray Center for Academic Support (B0206) - Alumni Lot (3380) removal	0	0	-32,278	-32,278	Removal of parking lot for the construction of the Beth Ray Center for Academic Support
Jun-2010	International Living Learning Center (B0207) - New Construction	153,182	32,399	34,185	66,584	Parking Lot changes - include increase in Bloss Hall South (3270) and construction of new lots (3288 and 3289); note: removal of residences for lot 3289 not included since they hadn't been included in 2005
Jun-2010	International Living Learning Center (B0207) - Street Vacation	0	0	-13,226	-13,226	Vacation and removal of a 389' segment (34' wide) of 17th Street between A Avenue and Western Blvd. This 13,226 sq feet was included in the 2005 Existing Impervious Surface: Public Streets calculation.
<b>Total</b>		<b>185,079</b>	<b>43,040</b>	<b>28,356</b>	<b>71,396</b>	

# Campus Master Plan - Sector Detail

## Sector H- Far South Campus

Area: 1,030,317 Square Feet (SqFt)/24 Acres{4% of campus}

### Existing/Approved Development

Existing Development\*: 133,535 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	976	0.1%
OSU IOTB** Footprint	11,372	1.1%
Non OSU Building Footprint	25,878	2.5%
Non OSU IOTB Footprint	1,226	0.1%
OSU Streets***	0	0.0%
OSU Parking***	229,888	22.3%
Public Streets	46,660	4.5%
<b>Total Existing Impervious Surface</b>	<b>316,000</b>	<b>30.7%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004

\*\*IOTB=Improvements Other Than Buildings

\*\*\*Includes gravel areas

### Development

#### Structures

	<u>GSF</u>	<u>% Total</u>
Maximum Future Allocation	50,000	100%
Development since 12/2004	5,274	11%
Remaining Development Allocation	44,726	89%

#### Open Space

	<u>SqFt</u>	<u>% Sector</u>
Existing Open Space	714,317	69%
New Development Total Footprint	-40,216	-4%
Open Space After Development	754,533	73%
Minimum Future Open Space	659,403	64%
Remaining Open Space Development	95,130	9%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Mar-2020	Softball Hitting Facility (B0570)	3,200	3,200	0	3,200	Project will include replacement of facility walks.
Feb-2020	Lorenz Soccer Stadium (M0896) - New Bleachers	6,381	6,381	0	6,381	Includes the bleachers and the press box (updated 5/20/20)
Feb-2020	Lorenz Soccer Stadium (M0896) - Bleacher demolition	-4,328	-4,328	0	-4,328	(updated 5/12/20)
Apr-2019	Softball Field (5016) Turf Replacement	0	0	0	0	Project includes replacing the grass field with synthetic turf. There are no physical changes that impact open space.



## Campus Master Plan - Sector Detail

Mar-2018	Softball Field Lighting	21	21	0	21	Footings for three (3) new light poles at the softball field. Note, there are a total of six lights but three are being installed on existing impervious surfaces.
Nov-2016	Whyte Track and Field Phase 2 - No Bleachers	0	0	0	0	No change to open space or parking areas. Improvements include paving in openspace areas to facilitate javelin, pole vault, discus, hammer. Paving beneath media cabinet, concrete mow strip, irrigation booster pump.
Aug-2011	Track and Field (Phase 1)	0	0	820	820	The project includes adding 820 sf of a new crushed rock access drive.
Aug-2011	Track and Field (Phase 1) - parking lot removal	0	0	-46,310	-46,310	The project includes removing 46,310 sf of existing parking area (net increase of 45,490 SF of open space when combined with additional 820 sf of a new crushed rock access drive).
<b>Total</b>		<b>5,274</b>	<b>5,274</b>	<b>-45,490</b>	<b>-40,216</b>	

# Campus Master Plan - Sector Detail

## Sector J- South Farm

Area: 2,276,565 Square Feet (SqFt)/52 Acres{9% of campus}

### Existing/Approved Development

Existing Development\*: 41,851 Gross Square Ft (GSF)

Existing Impervious Surface	SqFt	Sector %
OSU Building Footprint	36,747	1.6%
OSU IOTB** Footprint	1,151	0.1%
Non OSU Building Footprint	0	0.0%
Non OSU IOTB Footprint	0	0.0%
OSU Streets***	0	0.0%
OSU Parking***	0	0.0%
Public Streets	0	0.0%
<b>Total Existing Impervious Surface</b>	<b>37,898</b>	<b>1.7%</b>

\*Includes all existing/approved buildings IOTB GSF as of 12/2004  
 \*\*IOTB=Improvements Other Than Buildings  
 \*\*\*Includes gravel areas

### Development

#### Structures

	GSF	% Total
Maximum Future Allocation	350,000	100%
Development since 12/2004	-2,100	-1%
Remaining Development Allocation	352,100	101%

#### Open Space

	SqFt	% Sector
Existing Open Space	2,238,667	98%
New Development Total Footprint	-1,685	0%
Open Space After Development	2,240,352	98%
Minimum Future Open Space	1,798,486	79%
Remaining Open Space Development	441,866	19%

### New Development (projects)

Date	Description	Structure / Impervious Development (GSF)	Structure / Impervious Footprint (Sq Ft)	Parking Lot / Driveways (Sq Ft)	Total New Development Footprint (Sq Ft)	Planning Comments
Mar-2010	IOTB - 5 - Demolition	-22	-22	0	-22	Demolished between 2005 and 2012; 5/21/14: database update/validation
Mar-2010	IOTB - 81 - Demolition	-98	-98	0	-98	Demolished between 2005 and 2012; 5/21/14: database update/validation
Sep-2007	Residence (B0401) - Demolition	-1,980	-1,565	0	-1,565	
<b>Total</b>		<b>-2,100</b>	<b>-1,685</b>	<b>0</b>	<b>-1,685</b>	

#Name?

## Appendix B Parking Utilization Study



**Oregon State**  
University

OREGON STATE UNIVERSITY  
PARKING UTILIZATION STUDY 2021-2022

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FALL TERM

CAPITAL PLANNING & DEVELOPMENT  
UNIVERSITY LAND USE PLANNING  
APRIL 15, 2022

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## Attachments

- Attachment A – Parking Lot Overview
- Attachment B – Commuter Lot Utilization
- Attachment C – Residence Hall Parking Lot Utilization
- Attachment D – Zonal Parking Overview
- Attachment E – OSU Campus Parking Utilization Survey Details

## Additional Information/Contacts

For additional information or questions concerning this report, please contact Sara Robertson, OSU Associate Campus Planner, at 541-737-0459 or [sara.robertson@oregonstate.edu](mailto:sara.robertson@oregonstate.edu).

## Executive Summary

The *Oregon State University Parking Utilization Study 2021-2022* is an analysis of the parking conditions on the university's Corvallis campus for the 2021-2022 academic year. The study is completed annually during fall term, when enrollment and parking utilization are typically at their highest levels of the year.

Oregon State prepares this Parking Utilization Study in conformance with the Corvallis Land Development Code (LDC) Section 3.36.90 – Campus Master Plan Monitoring. The LDC specifies that Oregon State will monitor parking usage rates at least once per year and provide the results to the City of Corvallis (CMP 7.2.10, LDC Section 3.36.90.a.2). In addition to this study, Oregon State's Transportation Services department regularly monitors parking lot usage to guide management of the university's parking facilities.

- Oregon State's parking utilization rate for OSU General Use spaces for fall term 2021 was 63 percent. This utilization rate does not include Residence Hall spaces.
- The combined utilization rate for OSU General Use and Residence Hall space types in fall term 2021 was 66 percent.
- Utilization of individual Commuter Zone and Residence Hall parking lots varied from 0 to 100 percent.
- Parking utilization rates during fall term 2021 were substantially higher than those recorded during fall term 2020, when the university delivered more than 90 percent of its courses remotely and made a majority of employee positions remote in response to the COVID-19 pandemic. Utilization rates during fall term 2021, however, remain lower than pre-pandemic utilization rates. This may be due in part to expanded remote work options for employees.
- Oregon State had a campus-wide capacity of 5,911 OSU General Use spaces in Commuter Zone lots and 1,317 Residence Hall spaces in Residence Hall lots, for a total of 7,228 spaces providing parking to commuters and campus residents.
- Between fall term 2020 and fall term 2021 three parking lots were added to the parking system and one was permanently removed from the parking system. The Western Complex Lot (3370) added 132 spaces, the N. 16th St. West Lot (3223) added 155 spaces, and the N. 16th St East Lot (3224) added 36 spaces to the parking inventory. The Navy ROTC Armory East Lot (3265) was decommissioned, permanently removing 12 spaces from the parking inventory.
- Over the past five years, Oregon State's combined total General Use and Residence Hall space capacity has increased by 2 percent, 152 spaces.
- Student enrollment at Oregon State's Corvallis campus decreased by 361 students or approximately 1.5 percent from fall term 2020 to fall term 2021.
- Over the same time period, the total population (students and employees) at OSU's Corvallis campus saw a decrease of 1.3 percent.
- Twenty-six percent of the campus population purchased parking permits through the 2021-2022 utilization survey period.

## Parking Utilization Study

### Impacts of the COVID-19 pandemic on the 2021-2022 Parking Utilization Study

Oregon State University greatly altered its programs and operations at its Corvallis campus in response to the COVID-19 pandemic, which was reflected in the 2020-2021 OSU Parking Utilization Study. By the fall of 2021, however, Oregon State University's Corvallis campus operations began to return to pre-pandemic levels. Most of the Corvallis campus courses returned to in-person, on-campus instruction, and many employees returned to working full time on campus. Some in-person events on-campus also resumed. As of fall 2021, however, campus operations still differed from pre-pandemic operations, as some employees continue to work remotely in part or completely.

## Methodology

### Methodology for the 2020-2021 Survey

The 2021-2022 Parking Utilization Study uses the same methodology as studies conducted annually since the 2017-2018 academic year.

Since Oregon State began conducting parking utilization studies in 2007, the survey methodology has been refined on three occasions. Most recently, Oregon State made minor refinements to the parking utilization survey methodology for the 2017-2018 study year to help improve the efficiency and accuracy of data collection, to better align reported space types with parking management categories, and to make the utilization report simpler and more accessible to all audiences.

### Timeframe

Utilization counts occurred on Tuesday, October 12; Wednesday, October 20; Tuesday, October 26; and Wednesday, November 3. Surveys were conducted between the hours of 9 a.m. and 3 p.m., alternating weekly between Tuesday, a typical lab day, and Wednesday, a typical lecture day. This survey period is inclusive of the period of peak campus enrollment. Survey results from each of the four survey days are averaged to calculate the parking capacity and percent utilization reported for the Corvallis campus and individual lots.

### Parking Space Types

Parking spaces on OSU's campus can be divided into two general groups based on their purposes: General Use and University Support (*Table 1: OSU Parking Space Categories*). General Use spaces provide short-term and all-day parking for students, employees, and visitors, and typically require a permit or daily/hourly fee. These parking spaces are available to people commuting to campus to visit, work, or attend classes, as well as to residents living on campus. General Use parking space types include: Commuter, Residence Hall, ADA, Carpool, Reserved, and Short Term/Metered.

University Support space types are not open to the public for commuter or resident parking. They provide short-term loading areas, service vehicle parking, or overnight parking for Oregon State vehicles,

and program vehicles. Spaces that are temporarily unavailable due to construction are also included among University Support spaces. University Support space types include: Car Share, Construction, Dedicated, Leased, Loading Area, and Service.

Residence Hall spaces are included in the General Use category, but function differently than other General Use spaces. Residence Hall spaces provide overnight parking for university residents and are an important part of OSU's parking management strategy.

Prior to the 2017-2018 study year, Residence Hall spaces were classified as University Support spaces, and prior to 2014 Residence Hall spaces did not exist. Residents parked in any Student lot, which served both student commuters and student residents. To facilitate year to year comparisons, the campus-wide utilization rate is calculated both with and without Residence Hall spaces.

### Parking Lot Types

Within OSU's main campus, the space types listed above are located in four types of parking lots:

Commuter Zone, Residence Hall, Nonpublic, and Non-OSU (*Attachment A – Parking Lot Overview*).

Commuter Zone lots provide permitted commuter, short-term, metered, or free parking.

Residence Hall lots provide permitted Residence Hall parking exclusively to campus residents (*Table 2: Lots with Residence Hall Parking*). Some parking lots provide both General Use and Residence Hall parking zones in one lot.

Nonpublic lots restrict or limit access to a specific university group; examples include Magruder Hall West Lot (3362), Oceanography Shops Complex Lot (3287), and the Western Shop Lot (3369). Nonpublic lots also include small lots and loading areas that provide only nonpublic parking for service vehicles or vehicle loading areas. Commuter parking is not allowed within Nonpublic lots.

**Table 1: OSU Parking Space Categories**

General Use	University Support
Commuter	Car Share
Residence Hall	Construction
ADA	Dedicated
Carpool	Leased
Reserved	Loading Area
Short Term/Metered	Service

**Table 2: Lots with Residence Hall Parking**

Number	Description	Sector	Residence Hall Spaces *
3322	ORCHARD CT LOT	B	88
3333	NATIONAL FORAGE SEED CENTER EAST LOT	B	168
3341	RICHARDSON HALL SOUTH LOT	B	28
3223	N 16TH ST WEST OT	C	146
3224	N 16TH ST EAST LOT	C	36
3317	ORCHARD AVE NORTH LOT	C	33
3205	ADAMS AVE NORTHEAST LOT	D	77
3209	WASHINGTON AVE SOUTHEAST LOT	D	102
3217	ADAMS AVE	D	5
3218	S 13TH ST	D	26
3227	WASHINGTON AVE AND 11TH ST SOUTHEAST LOT	D	90
0205_PFL3	PARKING GARAGE (3RD FLOOR)	G	6
0205_PFL4	PARKING GARAGE (4TH FLOOR)	G	221
0205_PFL5	PARKING GARAGE (5TH FLOOR)	G	177
3280	MAY WAY LOT	G	114
Total			1,317

\*Residence Hall lots primarily consist of Residence Hall parking spaces, but lots can include other space types. Additionally several lots are split, providing both Commuter and Residence Hall spaces. The total shown in this table includes only Residence Hall parking spaces.



Non-OSU lots are parking areas located within the Corvallis campus boundary that are exclusively utilized by an entity other than OSU, typically through a lease agreement or private ownership. Non-OSU lots include parking areas for the EPA, Hilton Garden Inn, and the Forest Science Lab Lot.

**Utilization Calculation and Space Types included in Annual Report**

The Oregon State Parking Utilization calculation only includes General Use spaces located in Commuter Zone or Residence Hall lots because these are the only spaces available to commuters and campus residents. University Support space types and Non-OSU, Nonpublic, and temporarily closed lots are excluded from the parking utilization calculation because they are not available to commuters and residents.

**Parking Facilities**

Oregon State’s parking facilities provide permit-only parking as well as metered and short-term parking facilities throughout campus (*Table 3: Lots with Metered and Short-Term Spaces*). Free parking spaces are limited to one surface parking lot: South 17<sup>th</sup> Street and A Avenue Lot (3289) in Sector G. The provision of free parking in this lot was a city-required condition of the approval of the vacation of city right-of-way on 17<sup>th</sup> Street.

The City of Corvallis manages on-street parking facilities on city-owned streets located within and adjacent to Oregon State’s Corvallis campus boundary. These facilities include both metered and free parking. Metered spaces are located on the east side of 15<sup>th</sup> Street south of Jefferson Avenue. Free, on-street parking is provided along Orchard Avenue between 27<sup>th</sup> and 30<sup>th</sup> Streets in Sector C; on 11<sup>th</sup> Street, Jefferson Avenue, and Madison Avenue in Sector D; and on 16<sup>th</sup>, 17<sup>th</sup>, and A streets in Sector G. These City-owned facilities are not managed by Oregon State and are not included in the utilization study.

**New Parking Facilities**

Three new parking facilities were added to OSU’s parking system since the completion of the last parking utilization study (*Table 4: New*

**Table 3: Lots with Metered and Short-Term Spaces\***

<b>Number</b>	<b>Description</b>	<b>Sector</b>	<b>Spaces</b>
3334	MOTOR POOL WEST LOT	B	3
3341	RICHARDSON HALL SOUTH LOT	B	1
3901	CAMPUS WAY AND 35TH ST LOT	B	1
3902	FOREST SCIENCE LAB LOT	B	1
3234	PARK TERRACE ST WEST LOT	C	1
3242	COMMUNITY HALL SOUTH LOT	C	1
3250	FURMAN HALL WEST LOT	C	3
3252	MEMORIAL PLACE - CENTRAL CAMPUS	C	1
3260	N 26TH ST	C	3
3261	COLEMAN FIELD EAST LOT	C	1
3262	KERR ADMINISTRATION SOUTH LOT	C	2
3263	KERR ADMINISTRATION WEST LOT	C	9
3268	S BENTON PL	C	2
3269	DIXON RECREATION CENTER EAST LOT	C	2
3295	S 30TH ST METER	C	1
3300	S 26TH ST	C	41
3302	W JEFFERSON WAY	C	26
3303	SACKETT HALL NORTH LOT	C	1
3310	WOMENS BUILDING WEST LOT	C	1
3316	ORCHARD AVE SOUTH LOT	C	1
3206	M McNARY HALL NORTH METER LOT	D	1
3213	MADISON AVE CO-OP LOT	D	1
3364	OAK CREEK BUILDING NORTH LOT	E	2
3277	LASELLS STEWART CENTER WEST LOT	F	27
3283	RALPH MILLER LN	F	1
3271	CASCADE HALL SOUTH LOT	G	2
0205_PFL3	PARKING GARAGE	G	110
<b>Total</b>			<b>246</b>

\*Metered and Short-Term spaces include 30-Minute loading spaces. Table includes only General Use lots.

*Commuter Zone & Residence Hall*

*Parking Lots*). The Western Complex Lot (3370) was formerly known as the Foundation Center North Lot (3370) and was a Non-OSU lot leased to the OSU Foundation, along with the adjacent OSU Foundation Building. The Foundation Building and parking lot were renovated and converted to the Western Building and Western Complex Lot that now serve university uses. The Western Complex Lot adds 125 General Use spaces and 7 University Support spaces to the OSU parking inventory. Similarly, the N. 16<sup>th</sup> St. West Lot (3223) and the N. 16<sup>th</sup> St East Lot (3224) were leased to a Non-OSU entity, but they were returned to Oregon State management for fall term 2021. N. 16<sup>th</sup> St. West Lot (3223) adds 155 General Use spaces and 2 University Support spaces and the N. 16<sup>th</sup> St East Lot (3224) adds 36 General Use spaces to the OSU parking inventory.

**Table 4: New Commuter Zone & Residence Hall Parking Lots**

<i>Number</i>	<i>Description</i>	<i>Sector</i>	<i>General Use &amp; University Support Spaces</i>
3223	N 16TH ST WEST LOT	C	155
3224	N 16TH ST EAST LOT	C	36
3370	WESTERN COMPLEX LOT	E	132
Total			323

**Decommissioned Parking Facilities & Temporary Closures**

The Navy ROTC Armory East Lot (3265) was permanently removed from the parking inventory during the period between the 2020-2021 and 2021-2022 Parking Utilization Studies. This lot was demolished as part of the realignment and reconstruction of Washington Way. There were 12 General Use and University Support Spaces in the lot.

**Table 5: Decommissioned Parking Areas**

<i>Number</i>	<i>Description</i>	<i>Sector</i>	<i>General Use &amp; University Support Spaces</i>
3265	NAVY ROTC ARMORY EAST LOT	C	12
Total			12

Several lots were temporarily closed to parking during the study period due to ongoing construction. Lots can be closed temporarily for events, maintenance, or construction. Typically, temporary closures affect a limited portion of an existing lot rather than closing an entire lot. During the 2021-2022 survey period, the Cordley Hall West Lot (3315), Bates Hall North Lot (3313), Community Hall East Lot (3241), and Fairbanks Hall West Lot (3301) were completely closed due to construction. The Jefferson Way and 14<sup>th</sup> Street Lot (3210) was partially closed with 13 spaces closed due to pavement upheaval from tree roots. The Orchard Ave. South Lot (3316) was partially closed for construction of the new North District Utility Plant.

**Campus Population****Campus Population and the COVID-19 Pandemic**

Prior to the COVID-19 pandemic, OSU's fall term Corvallis campus enrollment and employment numbers provided a reasonable proxy for the number of people on campus during a typical day. In response to the pandemic, however, the university implemented remote instruction and remote work policies that significantly diminished the connection between the campus employment and enrollment numbers and the number of people on campus daily. While OSU returned to in-person instruction in the fall of 2021, some employees continue to work entirely or partially remotely. Thus, while the fall term 2021 student enrollment and employment numbers provide some indication of the number of people on campus during a typical day, using the enrollment and employment numbers to determine the daily campus population likely over estimates the number of people actually on campus. A more precise metric to determine OSU's daily campus population, however, does not exist at this time.

### Student Enrollment

Oregon State's overall enrollment increased slightly from fall term 2020 to fall term 2021, but that increase was due to growth of OSU's Extended Campus (Ecampus) enrollment, which provides all courses online. Student enrollment at OSU's Corvallis campus decreased by 1.5 percent during the same period. Over the last five years, enrollment on OSU's Corvallis campus has declined slightly from a peak enrollment of 24,809 students in 2017-2018 academic year to an enrollment of 23,111 students in the 2021-2022 academic year. Refer to *Table 6: Student Enrollment Trends* for enrollment trends over the past five years. Students enrolled exclusively in OSU's Extended Campus (Ecampus) courses are not included in the adjusted Corvallis Campus Enrollment, since these students do not take courses on OSU's Corvallis campus.

### Oregon State University Employment

At the time of the 2021-2022 Parking Utilization Study, Oregon State had a total of 5,138 employees reporting to the Corvallis campus (*Table 7: Employment Trends*). This number does not include graduate assistants and student employees, who are included in the student enrollment data noted in this report. The employee total for 2021-2022 also does not include Oregon State employees that report to university facilities located somewhere other than the Corvallis campus.

Employment data used in parking utilization reports prior to the 2020-2021 academic year did not disaggregate employees by location. The employment numbers and the campus population numbers that informed previous reports included all Oregon State employees and were slightly higher than the actual number of employees with positions that report to the Corvallis campus.

### Total Campus Population

The total campus population is calculated using both student enrollment counts and employee population numbers. As was discussed

**Table 6: Student Enrollment Trends**

Academic Year	Fall Term			Percent Change Corvallis Campus Enrollment**
	Fall Term Enrollment	Extended Campus Enrollment*	Corvallis Campus Enrollment**	
2017 - 2018	30,896	6,087	24,809	0.6%
2018 - 2019	30,986	6,565	24,421	-1.6%
2019 - 2020	31,719	7,467	24,252	-0.7%
2020 - 2021	32,312	8,840	23,472	-3.2%
2021 - 2022	33,193	10,082	23,111	-1.5%

\* Extended Campus Enrollment represents all students enrolled exclusively in Ecampus-offered courses; these students are not enrolled in any OSU Corvallis on-campus courses.

\*\* Corvallis Campus Enrollment is total enrollment minus Extended Campus enrollment.

\*\*\*Percent change is the change in Corvallis campus enrollment when compared with the previous year's main campus enrollment.

Source: OSU Office of Institutional Research, Enrollment/Demographic Reports, Enrollment Summary -- Fall Term 2021.

<https://institutionalresearch.oregonstate.edu/sites/institutionalresearch.oregonstate.edu/files/2022-02/enroll-fall-2021-v4.pdf> Retrieved: 11/16/2021.

**Table 7: Employment Trends**

Academic Year	Employees	Temp	Total*	Percent Change**
2017 - 2018	6,190	155	6,345	0.0%
2018 - 2019	6,291	136	6,427	1.3%
2019 - 2020	6,239	102	6,341	-1.3%
2020-2021	5,067	95	5,162	-18.6%
2021-2022	5,067	71	5,138	-0.5%

\* Graduate Assistants and Student employees are not included in the total employee headcount because they are captured in the enrollment headcount.

\*\* Percent Change is the change in the total number of employees when compared with the previous year's total employee population for the same term. Fall term 2016 to 2019 employment data included employees at locations other than the Corvallis Campus (Cascades Campus, Extension, Etc.). After Fall Term 2020, employment data include only employees with jobs that report to the Corvallis Campus. If Fall 2020 employment data included all OSU locations, the total employee headcount would be 6,400 and the Percent Change from Fall Term 2019 to Fall Term 2020 would be 0.9%.

Source for academic years 2020-2021 and 2021-2022: The October 2020 and 2021 Employment Reports had not been published at the time this parking utilization report was written. Data was obtained from the OSU Office of Institutional Research staff and included employment data for October 2020 and 2021.

Source academic years 2016-2017 to 2019-2020: OSU Office of Institutional Research, Faculty & Staff Reports, Employment Reports, October 2015 - October 2019. <https://institutionalresearch.oregonstate.edu/sites/institutionalresearch.oregonstate.edu/files/employment-jul-2019.pdf> Retrieved: 4/23/2020.

previously in this report, student enrollment and employee population numbers likely overestimate the actual number of people on campus during a typical day because some portion of OSU employees continue to work partially or completely remotely following the resumption of on-campus activities following the COVID-19 pandemic.

For the 2021-2022 academic year, the total Corvallis campus population was 28,249. As *Table 8: Campus Population* illustrates, the total Corvallis campus population has remained between 28,249 and 31,154 during the last five years. As was discussed earlier in the report, employment numbers for the 2017-2018 to 2019-2020 academic years includes employees at all Oregon State facilities not just the Corvallis campus. Employment data from the 2020-2021 academic year forward includes only employees that report to the Corvallis campus. For that reason, care should be taken with year to year comparisons that include employment numbers prior to 2020-2021.

## Parking Permit System

### Overview

The 2021-2022 academic year is the eighth year Oregon State has managed a zonal parking system on campus. The purpose of the zonal parking system is to better utilize existing campus parking facilities, to help reduce campus-related parking impacts in surrounding neighborhoods, and to reduce vehicle congestion and emissions by making it easier for commuters to quickly and reliably find available parking.

The zonal parking system divides the on-campus Commuter Zone and Residence Hall parking lots into seven Commuter zones (A1, A2, A3, B1, B2, B3, C) and one Residence Hall zone (R) (*Attachment D – Zonal Parking Overview*)<sup>1</sup>. Parking permits are priced by zone with pricing tied to demand. A Zone permits are the highest priced for lots in the highest demand, and C Zone permits are the lowest priced for lots with the least demand.

Oregon State University Transportation Services (Transportation Services) sells annual, term, monthly, daily, and hourly permits for all Commuter zones and term permits for Residence Hall zones. For short-term visits, individuals can purchase daily or hourly passes online, from a pay station, or directly from the Transportation Services Office. Other permits are sold for carpools, motorcycles, and service vehicles. Those with an ADA placard may park in any ADA space on campus with a valid permit for any

**Table 8: Campus Population**

Academic Year	Fall Term - October			
	Corvallis Campus Enrollment*	Employment	Total Population	Percent Change**
2017 - 2018	24,809	6,345	31,154	0.8%
2018 - 2019	24,421	6,427	30,848	-1.0%
2019 - 2020	24,252	6,341	30,593	-0.8%
2020 - 2021	23,472	5,162	28,634	-6.4%
2021 - 2022	23,111	5,138	28,249	-1.3%

\* Corvallis Campus Enrollment is the total student enrollment minus Extended Campus only enrollment.

\*\* Percent Change is the change in total population when compared with the previous year's total population for the same term.

Source: OSU Office of Institutional Research, Enrollment/Demographic Reports, Enrollment Summary -- Fall Term 2021.

<https://institutionalresearch.oregonstate.edu/sites/institutionalresearch.oregonstate.edu/files/2022-02/enroll-fall-2021-v4.pdf> Retrieved: 11/16/2021.

Employment data for 2020-2021 and 2021-2022 was obtained directly from OSU Office of Institutional Research staff. Source for prior years: OSU Office of Institutional Research, Faculty & Staff Reports, Employment Reports, October 2015 - July 2019.

<https://institutionalresearch.oregonstate.edu/faculty-and-staff-reports>

<sup>1</sup> Orchard Court residents are provided with a permit specific to the Orchard Court Lot (3322) issued by University Housing and Dining Services.

zone. On a limited basis, campus departments also can purchase reserved or private spaces on an annual basis.

**Permit Sales**

Revenue from the sale of parking permits funds OSU’s Transportation Services operations, parking facility maintenance, Beaver Bus shuttle services, and transportation options programs that are aimed at reducing the number of drive-alone trips associated with OSU.

Beginning in spring term 2020, the COVID-19 pandemic greatly reduced the number of students and employees commuting to campus, which greatly reduced the demand for parking and parking permits. By fall term 2021, however, the number of permits sold and the percent of the campus population with a permit returned to levels similar to those seen during years prior to the pandemic. As of the survey period between October 1 and November 1, 2020, 7,483 permits were sold, and

approximately 26 percent of the campus population had purchased parking permits (*Table 9: Permit Sales – Fall Term; Figure 1: OSU Population with Parking Permits – Fall 2017 to Fall 2021*).

**Table 9: Permit Sales - Fall Term**

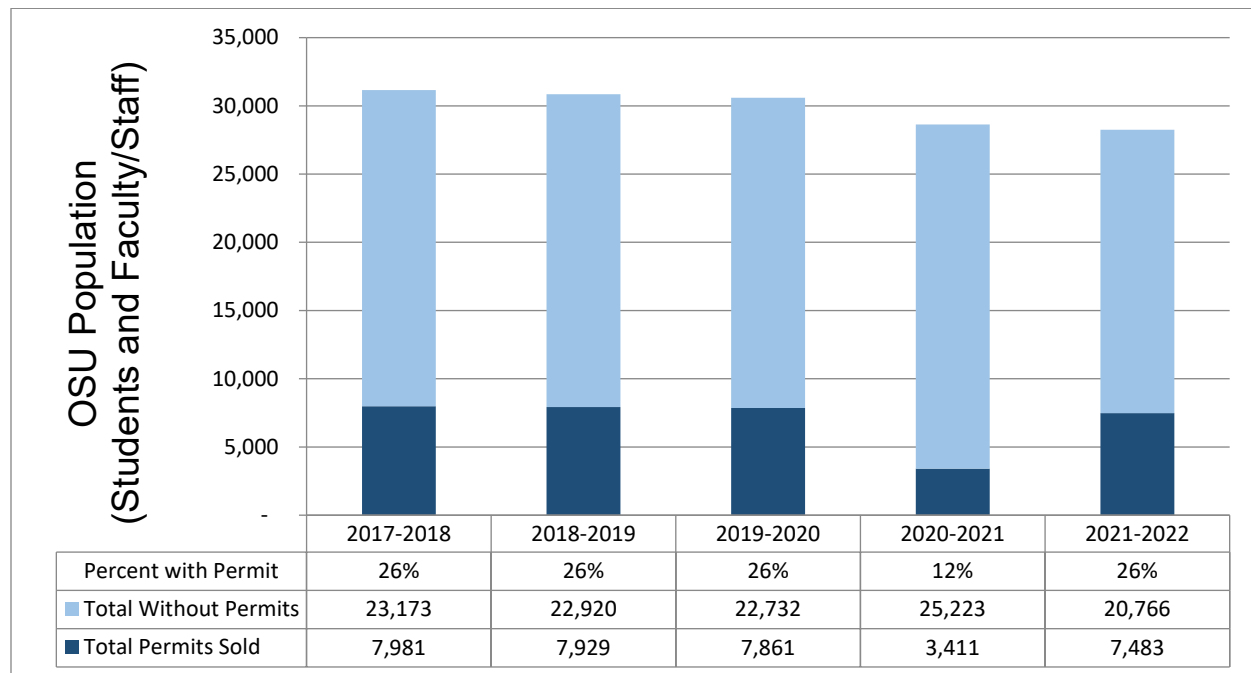
Academic Year	Total Permits Sold*	Total Campus Population	Percent with Permit	Percent Change**
2017 - 2018	7,981	31,154	26%	4%
2018 - 2019***	7,929	30,848	26%	-1%
2019 - 2020	7,861	30,593	26%	-1%
2020 - 2021	3,411	28,634	12%	-57%
2021-2022	7,483	28,249	26%	119%

\*Total Permits Sold is the average of active annual and term permits sold as of October 1 and November 1 plus the average of active monthly permits sold for each of the four days of lot counts.

\*\*Percent Change is the change in total permits sold compared to the previous year's total permit sales.

\*\*\*The 2018-2019 Parking Utilization Study miscalculated the Total Permits Sold for Fall Term 2018 permit sales. The corrected 2018-2019 Total Permits Sold is included in this table.

**Figure 1: OSU Population with Parking Permits – Fall 2017 to Fall 2021**



## Parking Capacity

### Parking Capacity

Parking capacity is a measure of the number of parking spaces available to commuters, visitors, and residents at the time of the Parking Utilization Survey. Year-to-year changes in capacity are influenced by the physical addition or removal of parking lots and spaces, as well as by changes in the management of individual spaces and lots. Parking capacity is not simply a measure of the number of physical spaces on campus, as there are several space types and lot types that are not available to commuter parking.

OSU's parking capacity increased slightly between the 2020-2021 academic year and the 2021-2022 academic year from 7,034 to 7,228 General Use and Residence Hall spaces (*Table 10: OSU Parking Capacity*). The Western Complex Lot (3370) was reconstructed and converted to a Commuter Zone lot adding 132 parking spaces to the university's parking system. The N. 16th St. West Lot (3223) and the N. 16th St East Lot (3224), were returned to Oregon State management and converted from Non-OSU lots to Residence Hall lots. The N. 16th St. West Lot (3223) adds 155 spaces to the inventory and the N. 16th St East Lot (3224) adds 36 spaces to the OSU parking inventory. The Navy ROTC Armory East Lot (3265) was decommissioned, permanently removing 12 spaces from the parking inventory.

Several lots were temporarily closed or partially closed due to construction activity nearby, which temporarily reduces capacity. The Cordley Hall West Lot (3315), Bates Hall North Lot (3313), Community Hall East Lot (3241), Fairbanks Hall West Lot (3301), Jefferson Way and 14th Street Lot (3210), and Orchard Ave. South Lot (3316) were completely or partially closed to accommodate construction projects (*Attachment A – Parking Lot Overview*).

**Table 10: OSU Parking Capacity**

Academic Year	Commuter*	Carpool	Reserved**	Short Term/ Metered	ADA	Total General Use Spaces	Residence Hall	Total General Use & Residence Hall Spaces
2017 - 2018	5,063	10	185	353	348	5,959	1,118	7,077
2018 - 2019	5,119	10	186	341	349	6,004	1,119	7,123
2019 - 2020	5,030	10	184	280	350	5,854	1,221	7,075
2020 - 2021	4,972	11	172	320	337	5,811	1,223	7,034
2021 - 2022	5,154	10	176	248	323	5,911	1,317	7,228

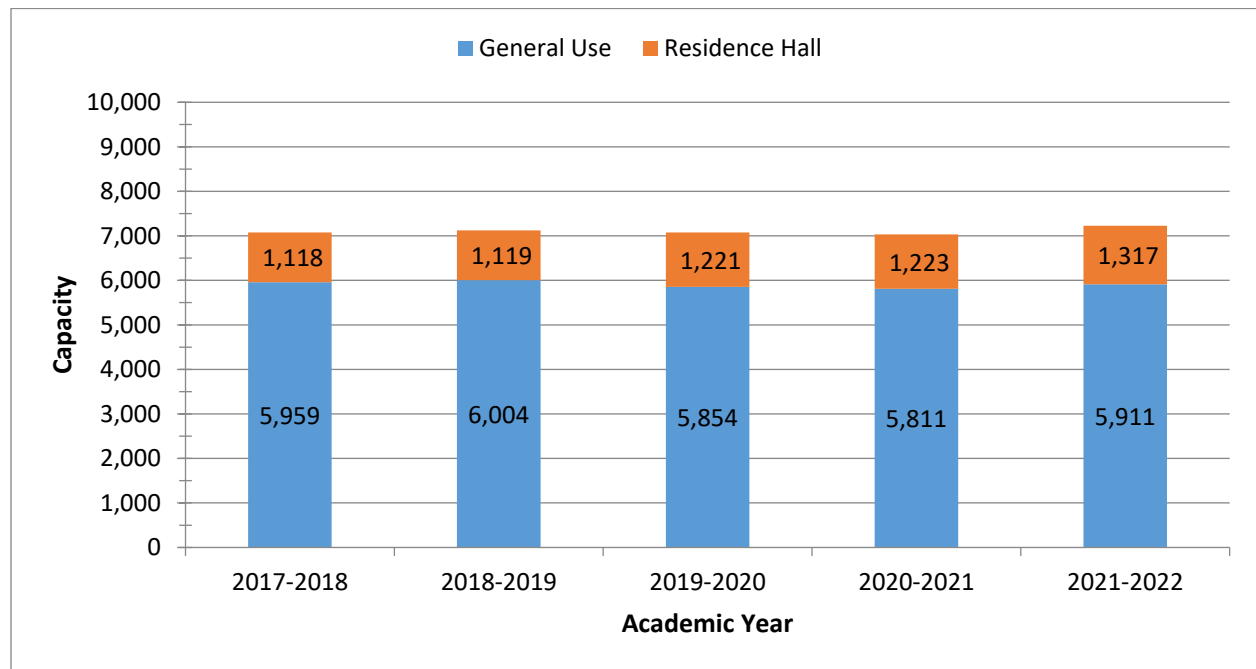
Note: All numbers are rounded to the nearest whole number.

\*The Commuter space type includes Commuter and Free spaces. For academic years prior to 2017-2018, the Commuter space type includes Commuter, Free, and Visitor spaces.

\*\*Reserved spaces include spaces reserved for Electric Vehicles.

Over the last five years, total OSU General Use and Residence Hall parking capacity has increased slightly by about 2 percent. There were 7,077 General Use and Residence Hall spaces in the 2017-2018 academic year, which increased to 7,228 spaces in the 2021-2022 academic year. The reopening of lots closed for construction and the construction of several new parking facilities contributed to the five-year increase in parking capacity. *Figure 2: OSU General Use & Residence Hall Parking Capacity – Fall 2017 to Fall 2021* illustrates this overall trend in total parking capacity over the past five years. Annually reported General Use capacities are shown in blue, Residence Hall capacities are shown in orange.

**Figure 2: OSU General Use & Residence Hall Parking Capacity – Fall 2017 to Fall 2021**



## Parking Utilization

### Campus Utilization

The campus-wide parking utilization rate is calculated as the ratio of occupied spaces to the total number of OSU General Use spaces in Commuter Zone parking lots. The 2021-2022 parking utilization rate was 63 percent (*Table 11: OSU Parking Utilization*). This is a significant increase from the 21 percent utilization rate of the previous year, which was heavily impacted by the COVID-19 pandemic, but it is not as high as utilization rates from years prior to the pandemic, which ranged from 73 percent to 76 percent utilization in the three years prior to the pandemic. OSU’s Residence Hall parking utilization rate also rose from 53 percent in 2020-2021 to 80 percent in 2021-2022 (*Table 11: OSU Parking Utilization, Table 12: Residence Hall Parking Utilization*). The Residence Hall parking utilization rate more closely matches its pre-pandemic levels, which ranged from 81 percent to 84 percent between the 2017-2018 academic year and the 2019-2020 academic year. Accordingly, the combined utilization rate of General Use and Residence Hall parking increased from 27 percent to 66 percent.

**Table 11: OSU Parking Utilization**

Sector	2017 - 2018			2018 - 2019		
	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization
A	222.0	113.5	51%	220	128	58%
B	726.0	554.3	76%	747	576	77%
C	1,474.8	1,057.3	72%	1,484	1,068	72%
D	885.0	678.0	77%	883	663	75%
E	159.0	109.3	69%	159	116	73%
F	1,254.0	1,046.5	83%	1,273	1,129	89%
G	940.0	614.8	65%	940	483	51%
H	298.0	175.5	59%	298	84	28%
Total OSU General Use	5,958.8	4,349.0	73%	6,004.0	4,246.8	71%
Residence Hall Spaces	1,118.0	902.0	81%	1,119.0	920.0	82%
Total OSU General Use & Residence Hall	7,076.8	5,251.0	74%	7,123.0	5,166.8	73%

Sector	2019 - 2020			2020 - 2021			2021 - 2022		
	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization
A	222	140	63%	222	29	13%	191	60	31%
B	750	616	82%	805	211	26%	895	642	72%
C	1,427	1,085	76%	1,336	341	26%	1,264	857	68%
D	782	622	79%	780	114	15%	772	488	63%
E	159	101	63%	155	55	35%	275	160	58%
F	1,274	1,127	88%	1,273	373	29%	1,274	971	76%
G	942	574	61%	943	109	12%	943	515	55%
H	298	99	33%	298	14	5%	298	35	12%
Total OSU General Use	5,854	4,363	75%	5,811	1,245	21%	5,911	3,727	63%
Residence Hall Spaces	1,221	1,027	84%	1,223	642	53%	1,317	1,058	80%
Total OSU General Use & Residence Hall	7,075	5,390	76%	7,034	1,887	27%	7,228	4,785	66%

The utilization rates of individual lots and campus sectors have fluctuated annually to some degree in response to annual modifications to the management of the zonal parking system. Changes to the zonal parking system can shift parking demand in some lots and locations, but generally, with the exception of the 2020-2021 study year, utilization trends have remained consistent since the implementation of the zonal parking system. As *Attachment B – Parking Lot Utilization* and *Attachment C – Residence Hall Parking Lot Utilization* illustrate, the utilization of Commuter Zone and Residence Hall parking facilities varies from zero percent to 100 percent. Parking utilization was generally higher in lots located relatively close to the campus core and in larger capacity lots with frequent shuttle service to the core of campus like those surrounding Reser Stadium.



**Table 12: Residence Hall Parking Utilization**

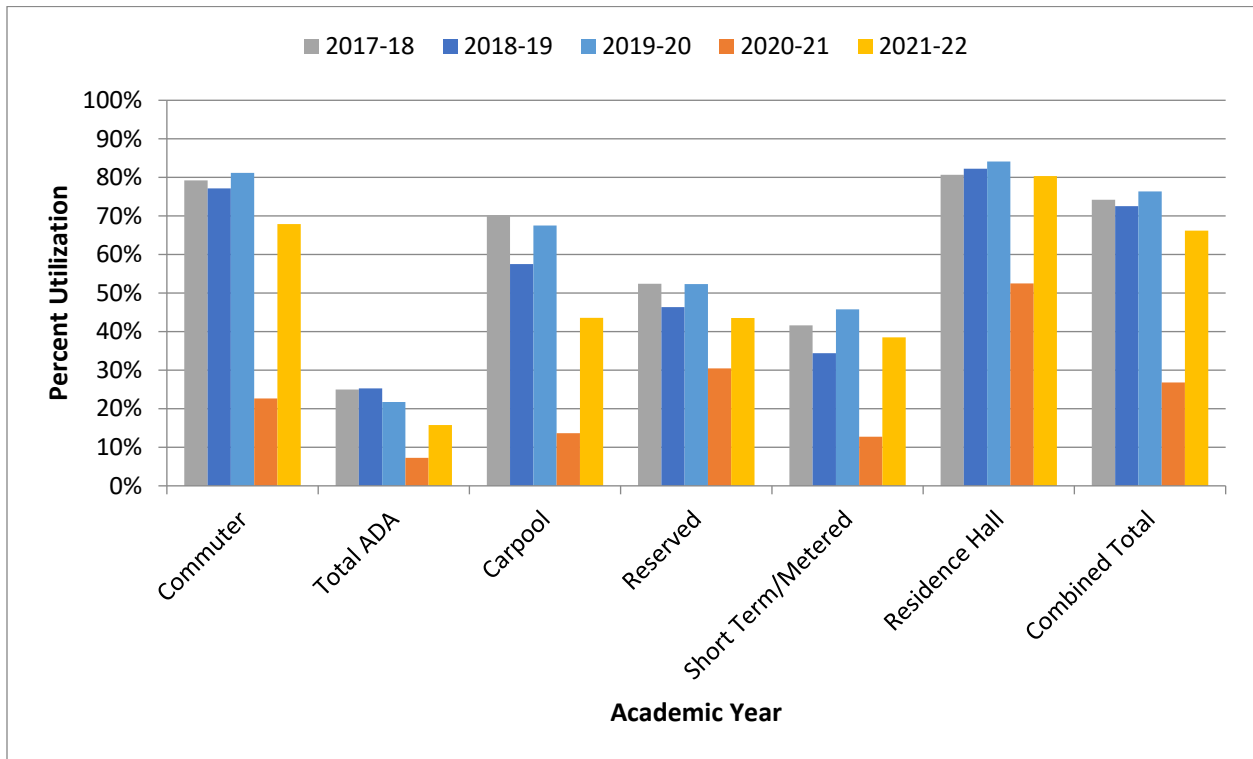
<i>Lot Number</i>	<i>Lot Description</i>	<i>Sector</i>	<i>Total Resident Spaces*</i>	<i>Occupied Resident Spaces*</i>	<i>Utilization</i>
3322	ORCHARD CT LOT	B	88	53	61%
3333	NATIONAL FORAGE SEED CENTER EAST LOT	B	168	157	94%
3341	RICHARDSON HALL SOUTH LOT	B	28	21	73%
3223	N 16TH ST WEST OT	C	146	88	60%
3224	N 16TH ST EAST LOT	C	36	1	2%
3317	ORCHARD AVE NORTH LOT	C	33	32	98%
3205	ADAMS AVE NORTHEAST LOT	D	77	77	100%
3209	WASHINGTON AVE SOUTHEAST LOT	D	102	102	100%
3217	ADAMS AVE	D	5	5	100%
3218	S 13TH ST	D	26	26	100%
3227	WASHINGTON AVE AND 11TH ST SOUTHEAST LOT	D	90	88	98%
3280	MAY WAY LOT	G	114	114	100%
0205_PFL3	PARKING GARAGE - 3RD FLOOR	G	6	6	100%
0205_PFL4	PARKING GARAGE - 4TH FLOOR	G	221	216	98%
0205_PFL5	PARKING GARAGE - 5TH FLOOR	G	177	73	41%
*Totals are rounded to the nearest whole number.		Total*	1,317	1,058	80%

### Parking Utilization by Type

In the five years prior to the 2020-2021 academic year and the beginning of the COVID-19 pandemic, Commuter and Resident Hall space types typically had fairly consistent utilization rates from year to year, while Carpool, Short Term/Metered, and Reserved space utilization rates were more varied. While utilization rates have returned to levels closer to their pre-pandemic levels, some space types continued to experience utilization rates that were slightly lower than their pre-pandemic levels. Commuter, Carpool, and ADA space types had noticeably lower utilization rates than they did prior to the pandemic, while Reserved, Short Term/Metered, and Residence Hall spaces had utilization rates similar to years prior to the pandemic.

Because most of the parking on campus is Commuter parking, it is understandable that the percent utilization for the Commuter space type follows a similar trend as the percent utilization for the combined total of all space types. Greater annual swings in the percent utilization of ADA, Carpool, Reserved, and Short Term/Metered spaces are expected given the relatively small number of these spaces. Accessible spaces (ADA spaces) tend to have a lower utilization rate overall than other space types because they are managed to ensure that users who need accessibility accommodations can find a parking space in close proximity to their destination throughout the day. Alternatively, Residence Hall spaces tend to have a higher utilization rate and a greater tolerance for a high utilization rate because Residence Hall permits are sold on a one-to-one basis of permits to number of Residence Hall spaces.

**Figure 3: Percent Utilization of Parking by Space Type – Fall 2017 to Fall 2021**



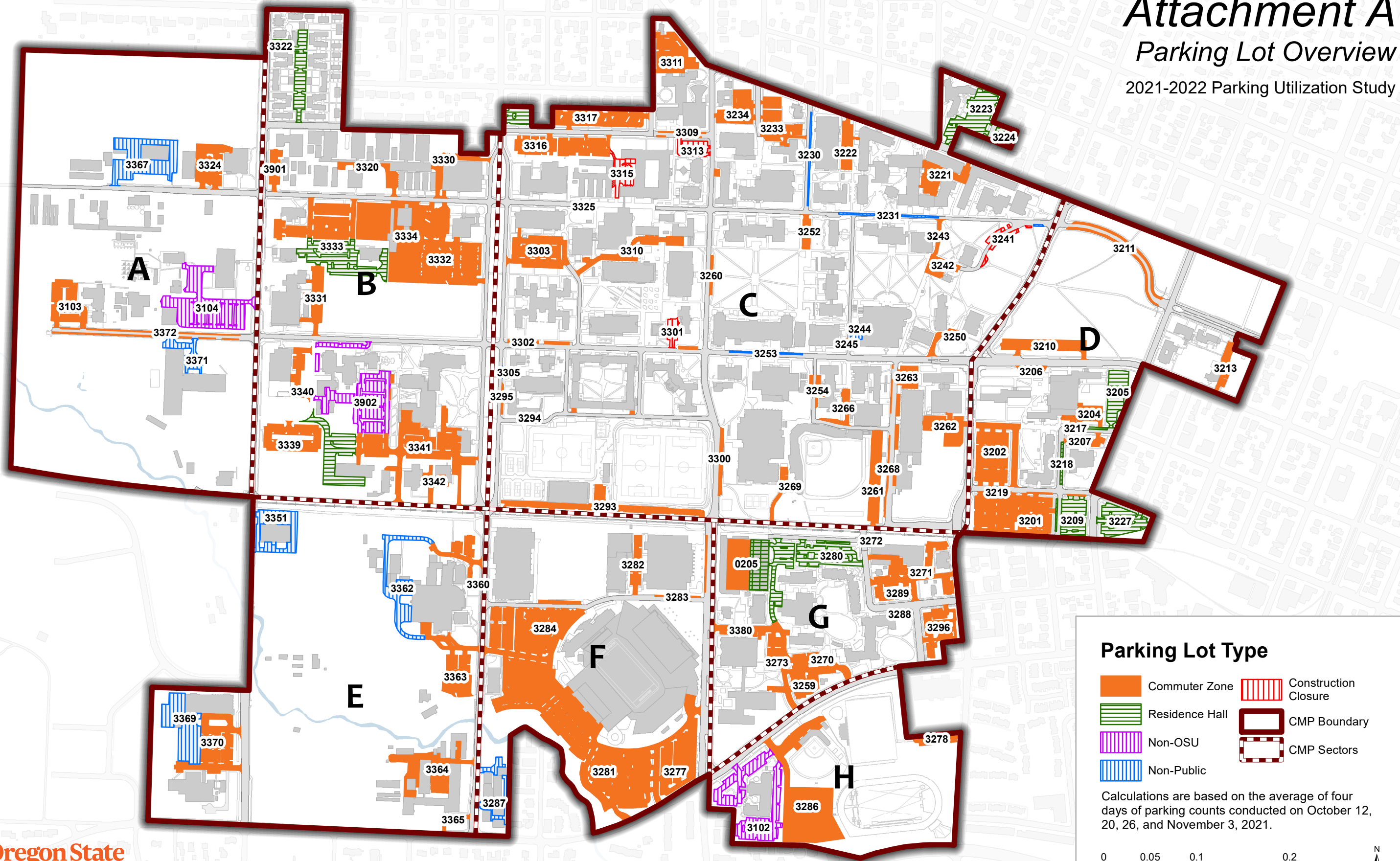
**Future Management of Parking Demand**

Oregon State will continue to manage its parking system efficiently while simultaneously working to encourage the use of transportation modes other than the single-occupancy vehicle. These efforts will be pursued concurrently and in partnership with city and regional transportation management efforts. Coordinated efforts will help reduce congestion and demand on parking and transportation facilities on and around campus. These efforts also support OSU’s goals to reduce greenhouse gas emissions and to use limited state funding efficiently.

# Attachment A

## Parking Lot Overview

2021-2022 Parking Utilization Study



**Parking Lot Type**

	Commuter Zone		Construction Closure
	Residence Hall		CMP Boundary
	Non-OSU		CMP Sectors
	Non-Public		

Calculations are based on the average of four days of parking counts conducted on October 12, 20, 26, and November 3, 2021.

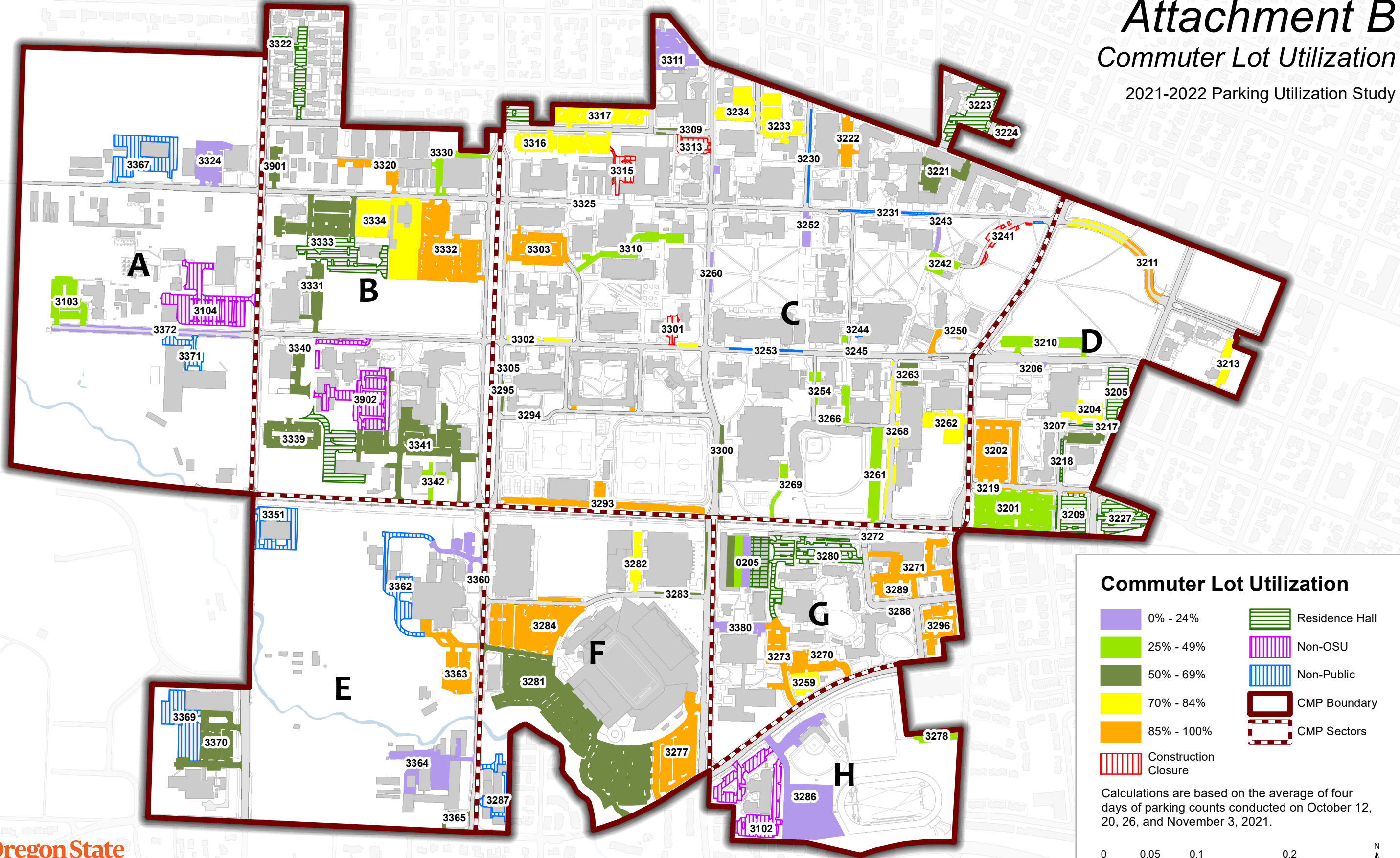
0 0.05 0.1 0.2 Miles

N



# Attachment B Commuter Lot Utilization

2021-2022 Parking Utilization Study



**Commuter Lot Utilization**

0% - 24%	Residence Hall
25% - 49%	Non-OSU
50% - 69%	Non-Public
70% - 84%	CMP Boundary
85% - 100%	CMP Sectors
Construction Closure	

Calculations are based on the average of four days of parking counts conducted on October 12, 20, 26, and November 3, 2021.

0 0.05 0.1 0.2 Miles

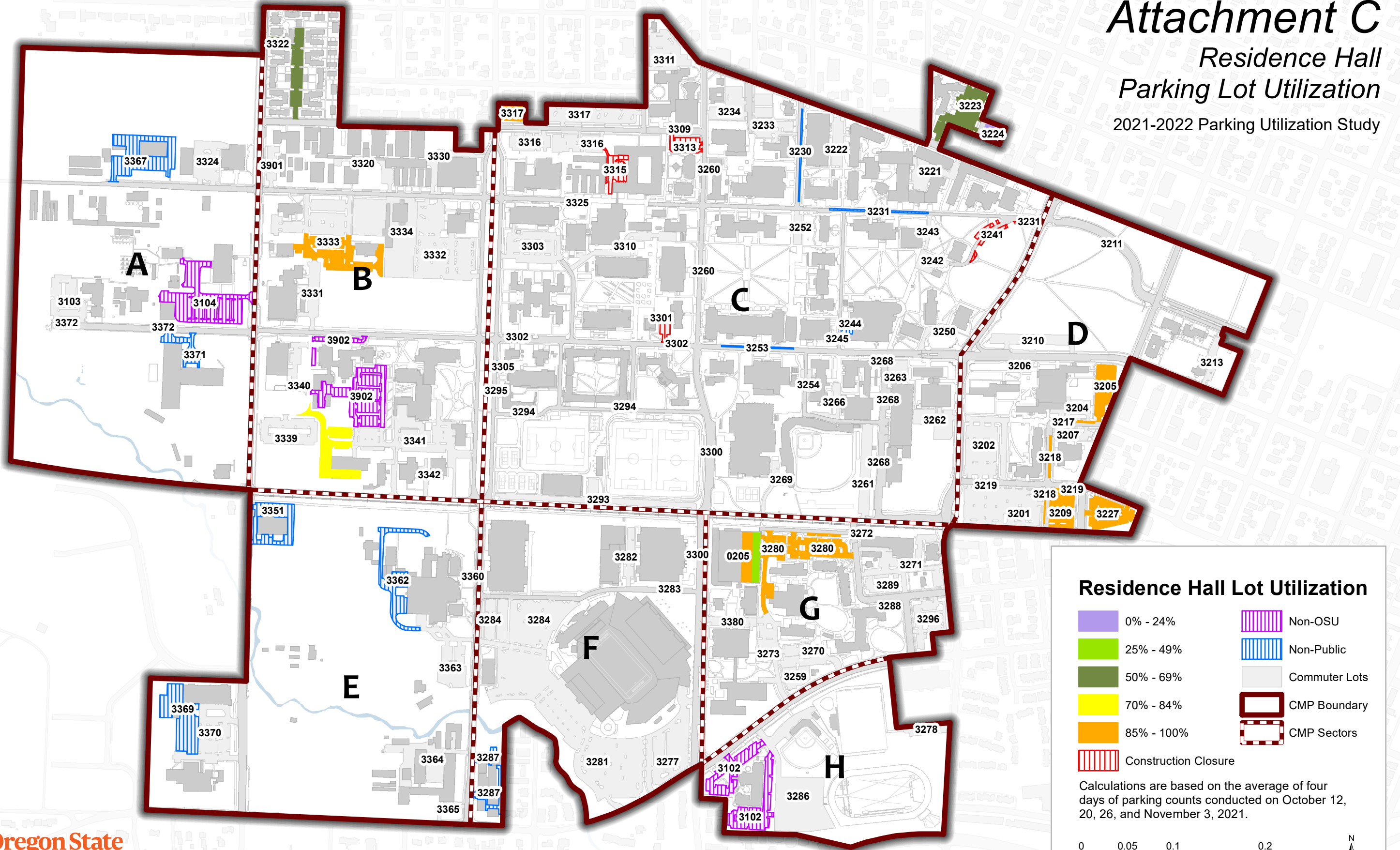
N



# Attachment C

## Residence Hall Parking Lot Utilization

2021-2022 Parking Utilization Study



### Residence Hall Lot Utilization

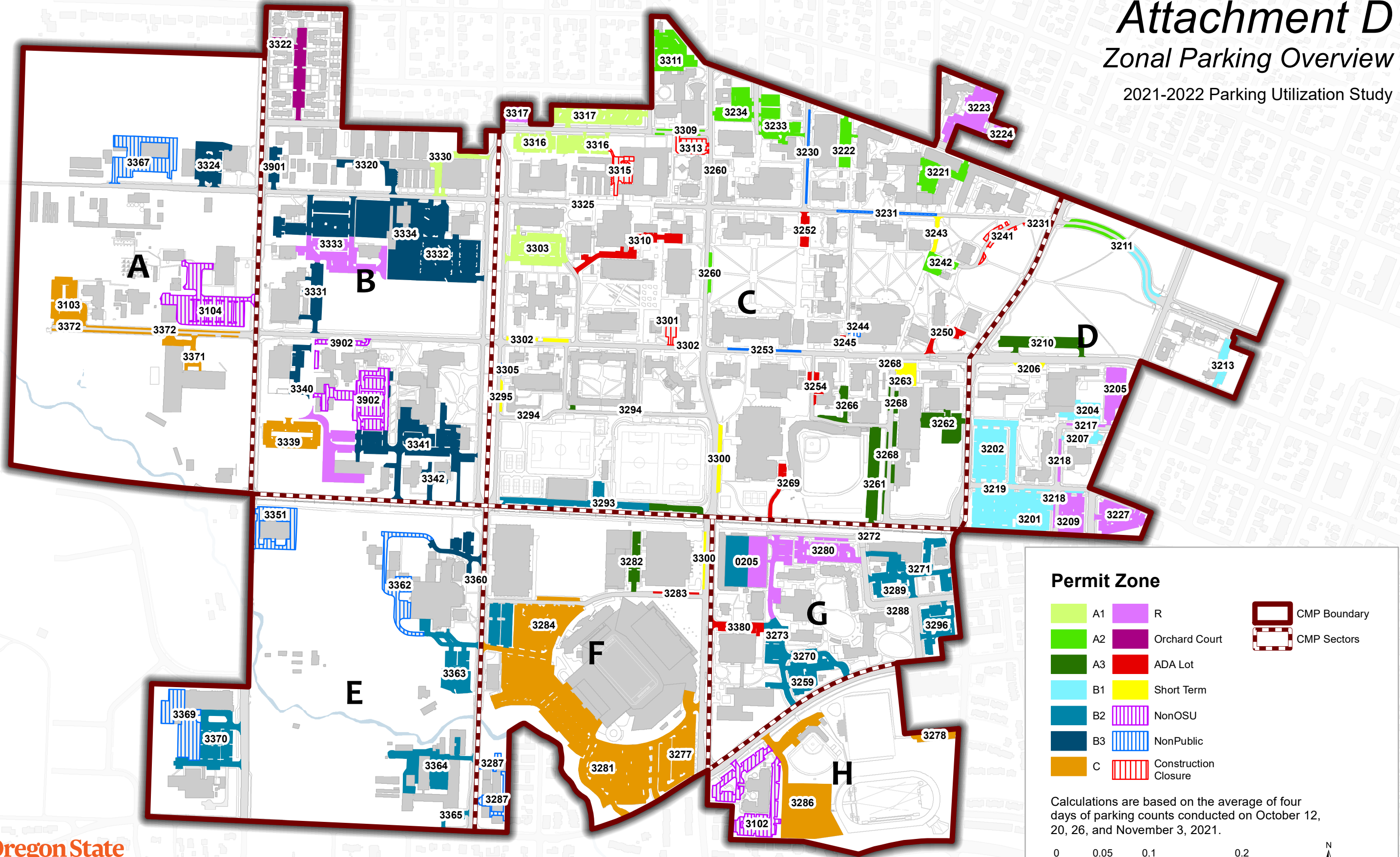
- 0% - 24%
- 25% - 49%
- 50% - 69%
- 70% - 84%
- 85% - 100%
- Non-OSU
- Non-Public
- Commuter Lots
- CMP Boundary
- CMP Sectors
- Construction Closure

Calculations are based on the average of four days of parking counts conducted on October 12, 20, 26, and November 3, 2021.



# Attachment D Zonal Parking Overview

2021-2022 Parking Utilization Study



**Permit Zone**

<span style="display:inline-block; width:15px; height:15px; background-color:#90EE90; border:1px solid black;"></span> A1	<span style="display:inline-block; width:15px; height:15px; background-color:#DDA0DD; border:1px solid black;"></span> R	<span style="display:inline-block; width:15px; height:15px; border:2px solid brown; border-style:dashed;"></span> CMP Boundary
<span style="display:inline-block; width:15px; height:15px; background-color:#32CD32; border:1px solid black;"></span> A2	<span style="display:inline-block; width:15px; height:15px; background-color:#800080; border:1px solid black;"></span> Orchard Court	<span style="display:inline-block; width:15px; height:15px; border:2px dashed brown;"></span> CMP Sectors
<span style="display:inline-block; width:15px; height:15px; background-color:#228B22; border:1px solid black;"></span> A3	<span style="display:inline-block; width:15px; height:15px; background-color:#FF0000; border:1px solid black;"></span> ADA Lot	
<span style="display:inline-block; width:15px; height:15px; background-color:#ADD8E6; border:1px solid black;"></span> B1	<span style="display:inline-block; width:15px; height:15px; background-color:#FFFF00; border:1px solid black;"></span> Short Term	
<span style="display:inline-block; width:15px; height:15px; background-color:#008080; border:1px solid black;"></span> B2	<span style="display:inline-block; width:15px; height:15px; border:1px dashed purple;"></span> NonOSU	
<span style="display:inline-block; width:15px; height:15px; background-color:#000080; border:1px solid black;"></span> B3	<span style="display:inline-block; width:15px; height:15px; border:1px dashed blue;"></span> NonPublic	
<span style="display:inline-block; width:15px; height:15px; background-color:#FFA500; border:1px solid black;"></span> C	<span style="display:inline-block; width:15px; height:15px; border:1px dashed red;"></span> Construction Closure	

Calculations are based on the average of four days of parking counts conducted on October 12, 20, 26, and November 3, 2021.

0 0.05 0.1 0.2 Miles

N















Attachment E - OSU Campus Parking Utilization Survey Details

Parking LotNumber	Zone	Description	Sector	Survey Date	Commuter			Residence			Carpool			Reserved			Short Term			ADA			Total General Use			Total General Use and Residence		
					Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization	Occupied Spaces	Total Spaces	Percent Utilization
0205_PFL3_B2	B2	PARKING GARAGE	G	10/12/2021	28	108	26%	0	0	n/a	0	0	n/a	6	8	75%	2	110	2%	0	0	n/a	36	226	16%	36	226	16%
0205_PFL3_B2	B2	PARKING GARAGE	G	10/20/2021	31	108	29%	0	0	n/a	0	0	n/a	4	8	50%	7	110	6%	0	0	n/a	42	226	19%	42	226	19%
0205_PFL3_B2	B2	PARKING GARAGE	G	10/26/2021	35	108	32%	0	0	n/a	0	0	n/a	3	8	38%	4	110	4%	0	0	n/a	42	226	19%	42	226	19%
0205_PFL3_B2	B2	PARKING GARAGE	G	11/3/2021	25	108	23%	0	0	n/a	0	0	n/a	4	8	50%	2	110	2%	0	0	n/a	31	226	14%	31	226	14%
0205_PFL3_R	R	PARKING GARAGE	G	10/12/2021	0	0	n/a	6	6	100%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	6	6	100%
0205_PFL3_R	R	PARKING GARAGE	G	10/20/2021	0	0	n/a	6	6	100%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	6	6	100%
0205_PFL3_R	R	PARKING GARAGE	G	10/26/2021	0	0	n/a	6	6	100%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	6	6	100%
0205_PFL3_R	R	PARKING GARAGE	G	11/3/2021	0	0	n/a	6	6	100%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	6	6	100%
0205_PFL4	R	PARKING GARAGE	G	10/12/2021	0	0	n/a	219	221	99%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	219	221	99%
0205_PFL4	R	PARKING GARAGE	G	10/20/2021	0	0	n/a	219	221	99%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	219	221	99%
0205_PFL4	R	PARKING GARAGE	G	10/26/2021	0	0	n/a	213	221	96%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	213	221	96%
0205_PFL4	R	PARKING GARAGE	G	11/3/2021	0	0	n/a	213	221	96%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	213	221	96%
0205_PFL5	R	PARKING GARAGE	G	10/12/2021	0	0	n/a	75	177	42%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	75	177	42%
0205_PFL5	R	PARKING GARAGE	G	10/20/2021	0	0	n/a	77	177	44%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	77	177	44%
0205_PFL5	R	PARKING GARAGE	G	10/26/2021	0	0	n/a	82	177	46%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	82	177	46%
0205_PFL5	R	PARKING GARAGE	G	11/3/2021	0	0	n/a	58	177	33%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	58	177	33%
3278	C	SPORTS COMPLEX EAST LOT	H	10/12/2021	21	47	45%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	21	47	45%	21	47	45%
3278	C	SPORTS COMPLEX EAST LOT	H	10/20/2021	24	47	51%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	24	47	51%	24	47	51%
3278	C	SPORTS COMPLEX EAST LOT	H	10/26/2021	18	47	38%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	18	47	38%	18	47	38%
3278	C	SPORTS COMPLEX EAST LOT	H	11/3/2021	23	47	49%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	23	47	49%	23	47	49%
3286	C	SPORTS COMPLEX WEST LOT	H	10/12/2021	6	243	2%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	8	0%	6	251	2%	6	251	2%
3286	C	SPORTS COMPLEX WEST LOT	H	10/20/2021	13	243	5%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	8	0%	13	251	5%	13	251	5%
3286	C	SPORTS COMPLEX WEST LOT	H	10/26/2021	7	243	3%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	8	0%	7	251	3%	7	251	3%
3286	C	SPORTS COMPLEX WEST LOT	H	11/3/2021	29	243	12%	0	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0	8	0%	29	251	12%	29	251	12%

# Appendix C Corvallis On-Street Parking Utilization Study

## MEMORANDUM

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Date: March 13, 2020

Project #: 24703

To: Oregon State University

From: Phill Worth, Grace Carsky

Project: OSU Neighborhood On-Street Parking Utilization

Subject: Neighborhood Parking Utilization – February 2020 Update

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## OVERVIEW

The City of Corvallis (City) requested that Oregon State University (OSU) conduct an on-street parking utilization study within three areas controlled by the City's residential parking permit program. This memorandum summarizes the agreed upon data collection and resulting supply and measured demand.

## DATA COLLECTION METHODS AND PERIOD

City staff directed OSU to collect one hour of on-street parking utilization data during a typical weekday while OSU was in normal session. The method of collection used video recording of all block-faces within each residential parking permit area, of which there are three. On-street parking occupancy was manually reduced from the video and entered into a Microsoft Excel spreadsheet. On-street parking supply data was obtained for each study area block-face from the Corvallis On-Street Parking Utilization Study that was completed in May 2016.

The City specified the hour of collection to occur between 11:00 AM and 12:00 PM. This hour was chosen, based on findings from the Corvallis On-Street Parking Utilization Study. This hour was found to represent the peak measured demand between the hours from 7:00 AM to 7:00 PM across the more than 7,200 parking spaces in the study area.

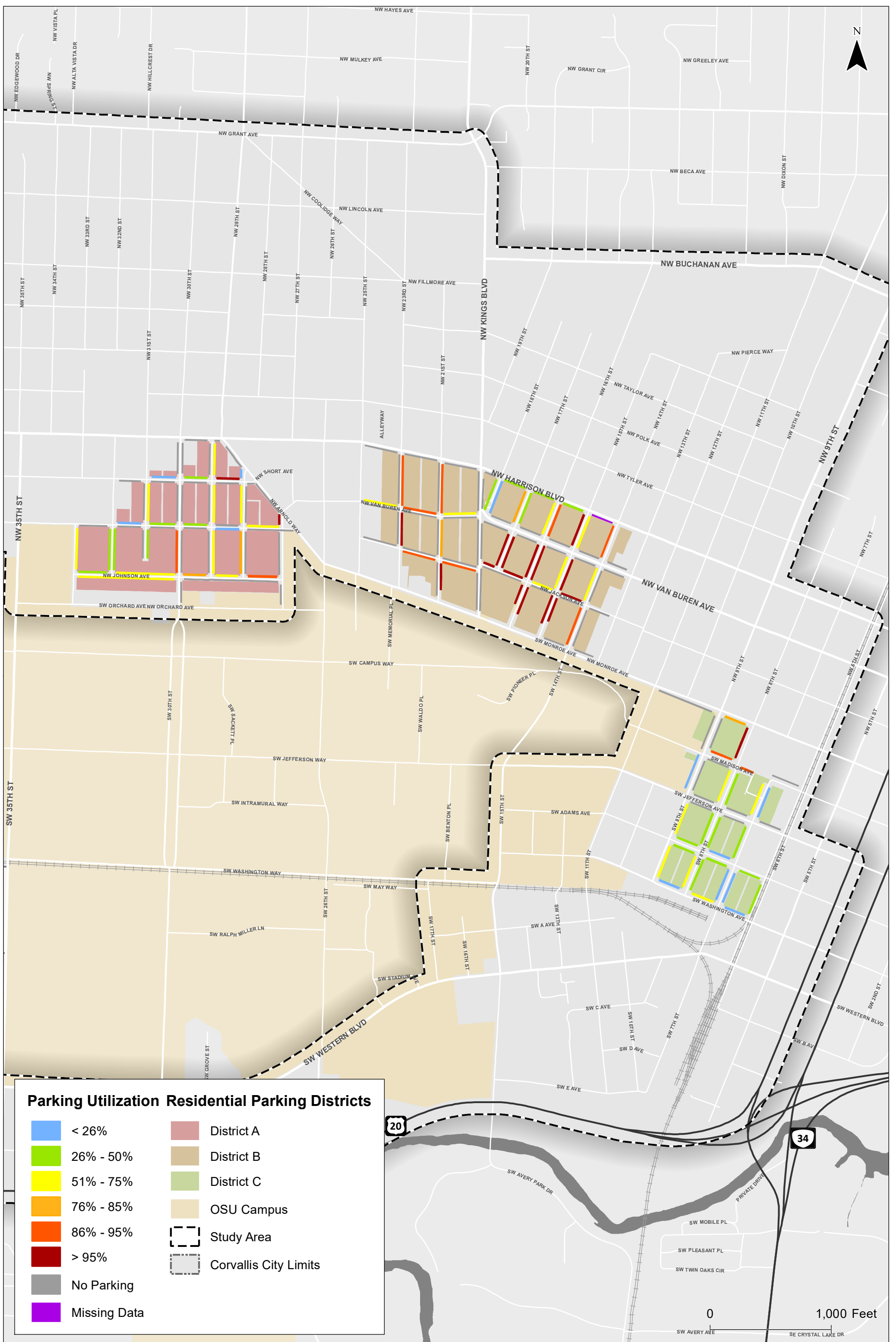
On-street parking utilization data was collected on Tuesday, February 4, 2020. This corresponded with the fifth week of Winter Term classes at OSU.

## OCCUPANCY RESULTS

Estimates of supply from the 2016 Corvallis On-Street Parking Utilization Study indicate that there are approximately 890 non-metered on-street parking spaces within the three residential parking permit areas (designated as Areas A, B, and C in Figure 1). This number may fluctuate, as most spaces are not striped. Capacity therefore depends on the efficiency of parking achieved by individual motorists. Supply in Area A is estimated to be approximately 293, approximately 329 in Area B, and approximately 268 in Area C.

During the Tuesday study hour between 11:00 AM and 12:00 PM, 556 vehicles were observed to be parked along the block-faces within the three permit areas. This equates to an overall utilization of approximately 62 percent. Utilization in Area A was approximately 58 percent, in Area B it was approximately 79 percent, and in Area C it was 47 percent. According to data from the 2016 Corvallis On-Street Parking Utilization Study, utilization during this same peak hour was approximately 61 percent in Area A, 80 percent in Area B, and 49 percent in Area C.

The measured level of occupancy means that approximately 334 parking spaces (38 percent) were vacant during the study period (123 in Area A, 70 in Area B, and 141 in Area C).



**Peak Hour Occupancy  
Tuesday 11 A.M. - 12 P.M.  
Corvallis, Oregon**

**Figure  
1**

C:\Users\gsarsky\OneDrive - Kittelson & Associates, Inc\Desktop\WPH Files\24703 - OSU Neighborhood Parking Utilization\GIS\Fe04\_11AM\_12PM.mxd - gsarsky - 1:47 PM 3/16/2020



## Appendix D Bike Parking Utilization Study



# OSU BICYCLE PARKING UTILIZATION STUDY 2021

CAPITAL PLANNING AND DEVELOPMENT

MARCH 22, 2022

## Executive Summary

- Oregon State University conducts the Bicycle Parking Utilization Study every two years.
- In 2021, the campus wide bike parking capacity was 9,105 spaces; this was an increase of 136 spaces or one point five (1.5) percent over the 2019 capacity.
- Between the hours of 10 am and 12 pm, campus wide bicycle parking utilization was eighteen (18) percent.
- On the days of the 2021 survey, Bike Parking Utilization was fifteen (15) percent lower than it was in 2019.
- Highest utilization rates exist at the residence halls.
- Eight (8) locations had utilization rates of 75 percent or greater.
- Campus Sectors D had the highest overall utilization rates, at 27 percent, while Sector H had the lowest utilization at three (3) percent. Sectors D and G are adjacent to the Central Area of campus, while Sector H is primarily athletic venues and a conference center and therefore experiences highest utilization during events.
- Ten (10) locations recorded abandoned bicycles.
- Seven (7) locations recorded installation problems affecting capacity.
- Thirty-seven (37) locations recorded some degree of damage to the rack.
- Fifty-two (52) locations recorded poor paint condition.

## OSU Bicycle Parking Utilization Study

### Overview

In the fall of 2021, Oregon State University (OSU) conducted a comprehensive bicycle parking survey. The survey recorded bicycle rack utilization and condition on Tuesday and Wednesday, October 26<sup>th</sup> and 27<sup>th</sup>. The weather conditions on the days of the survey were good for biking. Both days had similar weather, with temperatures in the mid 50's with partial cloud cover and minimal precipitation.

The survey measured total capacity for on-campus bike parking at 9,015 bike parking spaces. Of these spaces 3,409 (38 percent) are covered and 5,668 (62 percent) spaces are uncovered. These values reflect a 1.5 percent increase in overall capacity and a three (3) percent increase in covered spaces over the previous survey conducted in 2019. The 2021 survey measured an average, campus wide bicycle parking utilization rate of eighteen (18) percent. This utilization rate is fifteen (15) percent lower than the utilization rate recorded in the fall 2019 survey. Areas where utilization exceeded capacity generally included residence halls and the more densely developed northeast portion of campus. This is consistent with utilization patterns observed in previous years.

### Methodology

University Land Use Planning staff conducted the bike parking capacity count in September of 2021. Planning staff walked through campus verifying the bike parking locations and recorded in ArcGIS existing, new, and removed bike racks. Staff used maps containing the most recent campus ArcGIS data for reference in the field. Staff also counted the functional bike parking spaces in each rack, recorded the hoop type and its status as covered or uncovered, and documented rack condition (damage and paint).

University Land Use Planning staff then generated survey forms and maps using data from the capacity inventory for use in the Utilization Survey. Utilization is measured by counting the number of bicycles in or adjacent to racks. The Utilization Survey divides campus into six (6) sections that can be easily surveyed by one or two people on foot, within the two-hour time frame allotted for the survey. Survey sections and parking locations are mapped in **Appendix A: Bicycle Survey Sections**. The bike parking sections are different from the Campus Master Plan (CMP) sectors; the bike parking sections divide campus into smaller areas.

The utilization survey was conducted between 10 a.m. and 12 p.m. on Tuesday, October 26 and Wednesday, October 27<sup>th</sup>. Two mid-week days are used to produce an average utilization figure based on data collected on both a student lecture and a lab day. The number of students on campus differs on lab and lecture days, and similarly, building use differs between days. Therefore, utilization fluctuates from site to site, across campus, based on the day of the week. For this reason, it is necessary to survey on both lab and lecture days to determine an average site and campus wide utilization. However, this utilization survey methodology will fail to capture highest utilization at sites serving athletic or conference facilities. Peak utilization at locations serving athletic and conference facilities will occur in conjunction with scheduled events such as practices and events.

To conduct the survey, faculty, staff and student volunteers walked through the bike parking sections counting parked bicycles. Surveyors recorded data on paper forms, using maps and tables generated from the capacity inventory. Volunteers recorded bikes both in and out of racks. Bikes locked to trees, railings, and otherwise out of racks were counted and entered into the utilization counts for the nearest adjacent rack. This process can create unusually high utilization percentages in areas where bike parking capacity is lower than the number of bikes present. Volunteers also recorded abandoned bikes and damaged racks not already captured during the capacity inventory. University Land Use Planning staff then entered the

collected utilization and condition data into Excel and ArcGIS as point feature attributes. Staff conducted capacity and utilization analysis in Excel and mapped results in ArcGIS. Staff used Excel to evaluate changes in capacity and utilization over previous years, as well as to determine the current utilization and capacity trends across campus. Using ArcGIS it is possible to see the locations on campus that have damaged racks, rack installation problems, and abandoned bicycles. ArcGIS also makes it possible to illustrate which areas of campus have the highest capacity and experience high utilization.

## Capacity Inventory

The bicycle parking capacity inventory quantifies the number of functional bike parking spaces on campus, the type of rack (e.g., hoop or non-hoop), as well as if the bike parking is covered or uncovered.

### **Damaged Racks and Abandoned Bikes**

Bike parking capacity is the number of functional bike parking spaces available on campus. Hoop racks provide two (2) spaces per hoop when installed correctly. Incorrect rack installation, abandoned bikes, and damaged racks reduce available capacity. The capacity inventory indicates the number of bicycle parking spaces that are present with correctly installed and undamaged racks. Racks with damage and installation problems affecting capacity are recorded during the capacity inventory, while racks with abandoned bicycles are recorded within the utilization survey. Of the 382 locations on campus, the 2021 survey found ten (10) locations with abandoned bicycles. The survey found seven (7) locations where rack installation problems affected capacity. The survey also identified thirty-six (36) locations with some degree of damage, three (3) locations with bikes out of racks, and fifty-two (52) locations with fair to poor paint condition. **Appendix B: Condition Map and Report** provides detailed information on these locations.

### **Total Capacity**

In 2008, the first year of the bike parking survey, there were 6,145 bike parking spaces on campus. OSU has increased bike parking capacity every year since the survey began, installing on average more than 300 new bike parking spaces each year. As of 2021, there were 9,105 bike parking spaces available on campus. This represents a 46 percent increase in total bike parking capacity over the 2008 capacity (**Table 1: Bike Parking Capacity 2008-2019**). OSU added 136 bike parking spaces to capacity between 2019 and 2021, representing a 1.5 percent increase in total capacity. Fifty-six (56) new covered bike parking spaces were added at the Western Building and Western Shops Building. Substantial new bike parking was also provided with the construction of new Peavy Hall and the expansion of Magruder Hall.

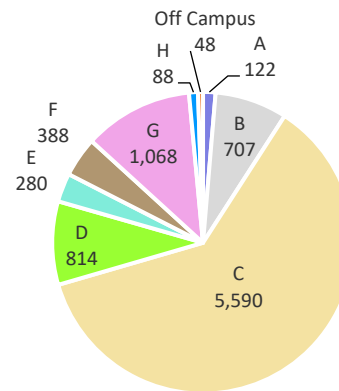
**Table 1: Bike Parking Capacity 2008-2019**

Survey Year	Campus Wide Capacity
2008	6,145
2010	6,842
2012	7,491
2014	8,181
2015	8,855
2017	8,942
2019	8,969
2021	9,105

**CMP Sector Capacity**

**Figure 1: Bike Parking Capacity by Campus Sector** illustrates the share of campus wide bike parking capacity provided within each campus sector. Due to the large difference in intensity of development, use, and size between campus sectors, the sector bike parking capacity varies greatly across sectors. Sector C represents the campus core and has the largest number of bike parking spaces (5,590 or 61 percent). It is the largest campus sector by area (158 acres), and it has the highest density of development and intensity of use. Sector A is the second largest campus sector by area (77 acres), but it has the second lowest bike parking capacity among campus sectors. Sector A is largely agricultural in use; therefore, it has fewer structures and a lower intensity of development, requiring fewer bike parking spaces. The difference in development and intensity of use between sectors has a large impact on the need and provision of bike parking spaces. Spaces are not distributed evenly across campus but are provided according to intensity of development and type of use. The majority of bike parking is located predominantly within Sector C, with large capacity racks located near residence halls, as illustrated in **Appendix C: Bicycle Parking Capacity**.

**Figure 1: Campus Sector Bike Parking Capacity**

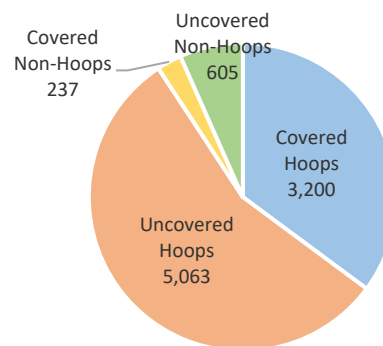


**Bike Parking Type Groups**

On the OSU campus, bike parking can be organized into four groups for analysis: Covered Hoops, Covered Non-Hoops, Uncovered Hoops, and Uncovered Non-Hoops. In the past OSU provided various types of non-hoop racks. OSU’s goal is to, over time, replace the non-standardized rack types with standard hoop racks, provided replacement racks do not conflict with pedestrian and ADA access. OSU provides covered bike parking with new development and, when possible, in other locations not associated with development. Over the years, OSU has provided an increasing share of covered bicycle parking on campus.

**Figure 2: Campus Wide Bike Parking Capacity** illustrates the share of bike parking capacity represented by the four bike parking types campus wide. Uncovered hoops provide most of the campus bike parking capacity with 5,063 spaces or 55 percent of total capacity. Covered hoops provide the second largest share of bike parking with 3,200 spaces or a 35 percent share of the total. Uncovered non-hoops provide only 605 parking spaces or seven (7) percent of the total. Covered non-hoops are the smallest share, with 237 spaces or three (3) percent of total bike parking capacity.

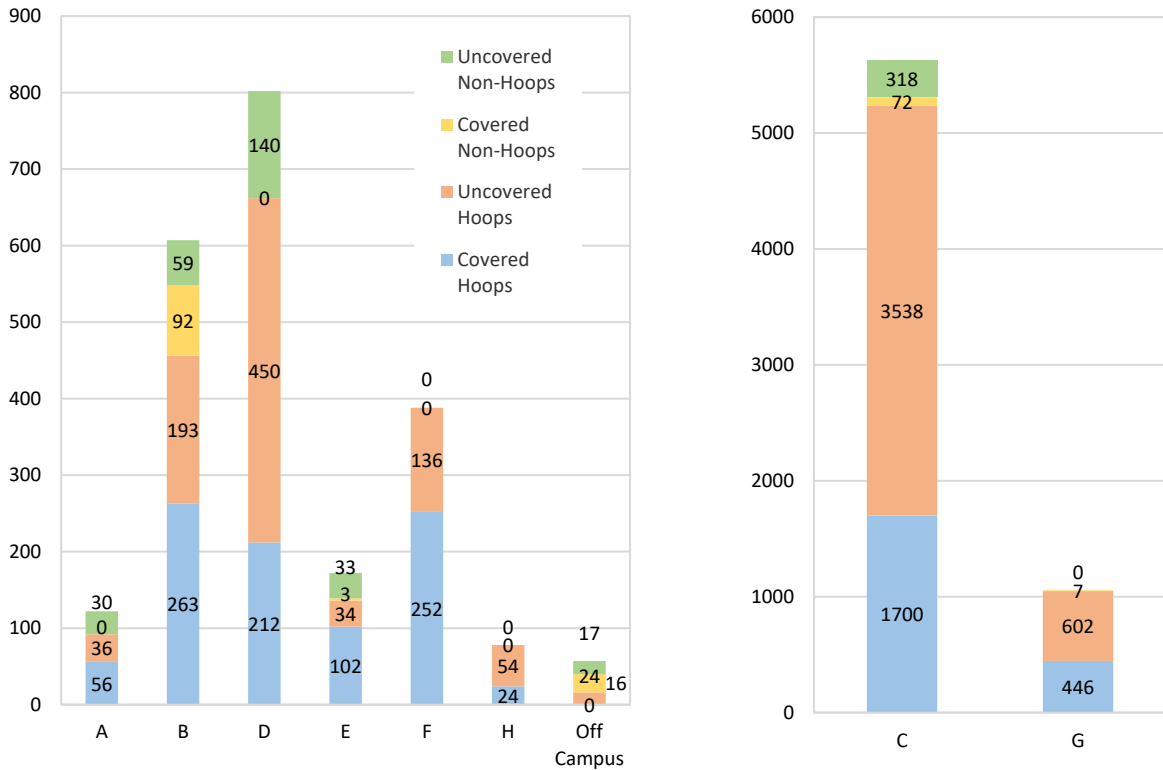
**Figure 2: Campus Wide Bike Parking Capacity**



As previously mentioned, due to the large difference in development intensity and size of the campus sectors, sector bike parking capacity and capacity by type of rack vary greatly by sector.

**Figure 3** illustrates bike parking type as a share of sector parking capacity. The bike parking capacity of sectors C and G are so much greater than the other sectors that when charted in **Figure 3** they must be displayed at a different scale than the other sectors. Also, as **Figure 3** illustrates, some sectors do not provide all four types of bike parking. Sectors F and H only have hoop racks, while sector D has no covered non-hoops. As OSU replaces old non-hoop racks and installs standard OSU hoop racks with new development the share of hoops, both covered and uncovered, will gradually increase in all sectors.

**Figure 3: Bike Parking Type as a Share of Sector Capacity**



**Campus Wide Hoop Space Capacity**

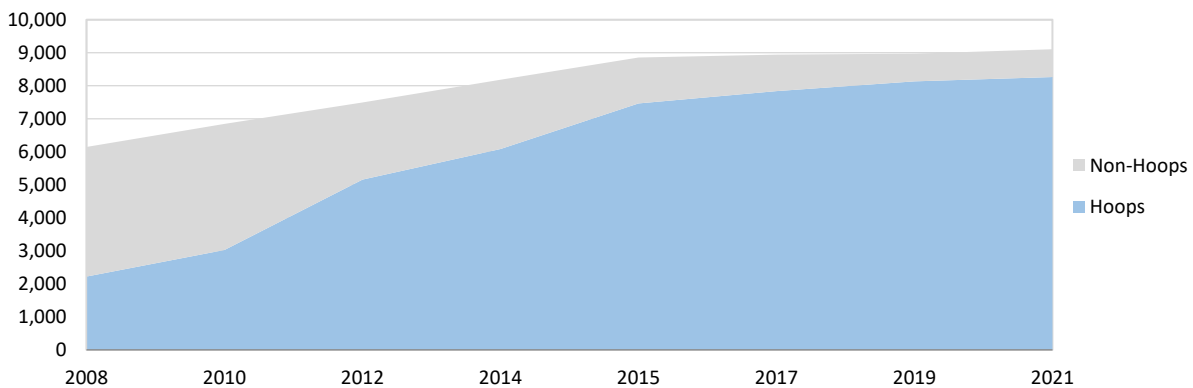
The 2021 capacity survey determined that 91 percent of campus bike parking spaces (8,235 spaces) are OSU standard hoops (**Table 2**). In 2008, only 36 percent of OSU’s bike parking spaces (2,219 spaces) were standard hoops. The 2021 capacity count illustrates there has been a 271 percent increase in hoop spaces in the past twelve years (**Figure 4**). Between 2019 and 2021, OSU added 111 hoop spaces, or increased hoop spaces capacity by (1) percent (**Table 2**).

OSU installs new hoops with new development projects. OSU also replaces non-hoops with hoops in existing bike parking locations when a change would not interfere with pedestrian or ADA access. However, hoop racks require more space than non-hoop racks. Therefore, at times OSU cannot place hoop racks in the same location as non-hoop racks, due to space constraints. Hoop rack locations are mapped in **Appendix D: Hoop Type Map**.

**Table 2: OSU Standard Hoop Spaces 2008-2019**

Survey Year	Hoop Spaces	Non-Hoop Spaces	Total Capacity	Hoop Capacity
2008	2,219	3,926	6,145	36%
2010	3,026	3,816	6,842	44%
2012	5,156	2,335	7,491	69%
2014	6,084	2,097	8,181	74%
2015	7,462	1,393	8,855	84%
2017	7,839	1,103	8,942	88%
2019	8,134	835	8,969	91%
2021	8,235	842	9,105	91%

**Figure 4: Hoop and Non-Hoop Bike Parking Capacity Change Over Time**



**Campus Wide Covered Space Capacity**

Covered bike parking is parking underneath a bike shelter, within an enclosed area such as a porch, or substantially protected by building eaves. OSU provides 50 percent of all required new bike parking as covered parking per LDC Section 3.36.60.13.c. New bike parking provided separate from development does not have to be covered per LDC regulations. Numerous factors other than land development code regulations affect the provision of covered bicycle parking. Cost is one factor. Covered bicycle parking is significantly more expensive than uncovered parking, costing approximately \$2,300 per space. Uncovered parking costs approximately \$100 per space. Additionally, siting covered bicycle parking is more challenging than siting uncovered parking due to the size of the structures. OSU has the need to balance function, aesthetics, transportation mode-prioritization, and safety. This is especially true in the built-out, historic portions of campus. City of Corvallis land development code regulations for the OSU National Historic District apply to the installation of new covered bike parking structures within the Historic District. These installations are subject to review and approval by the City of Corvallis Historic Resource Commission. Despite these challenges, OSU continues to increase the amount of covered bike parking on campus.

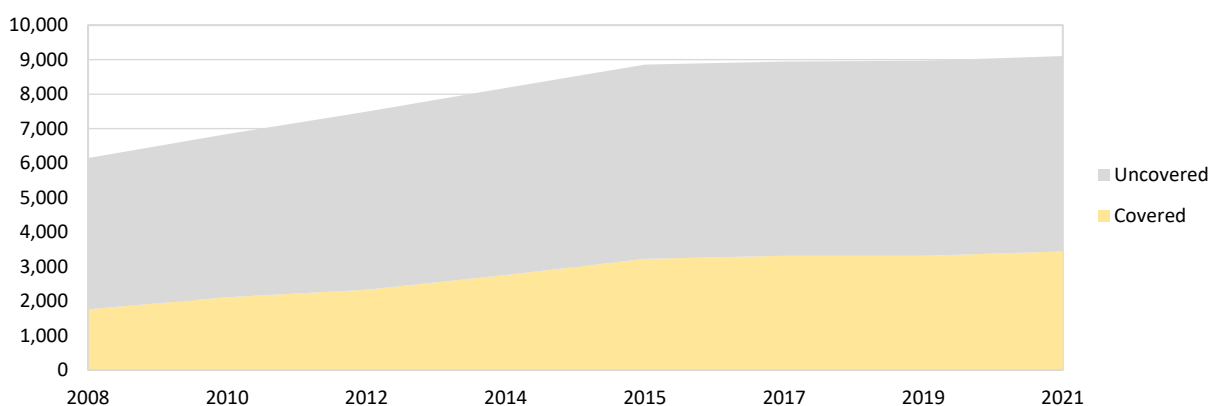
In 2008, only 29 percent of the total bike parking capacity (1,759 spaces) was covered (**Table 3**). Between 2008 and 2021, OSU increased the number of covered bike parking spaces on campus by 1,650 spaces, or 95 percent. As of 2021, 38 percent of the total bike parking capacity was covered (3,409) bike parking spaces) (**Table 3**). Between 2019 and 2021, covered bike parking capacity increased by 96 spaces, or three (3) percent more covered bike parking spaces than in 2019. **Appendix E: Cover Type Map** identifies the covered status of bike racks on campus.



**Table 3: Covered Bike Parking Spaces 2008-2019**

Survey Year	Covered Spaces	Uncovered Spaces	Total Capacity	Covered Capacity
2008	1,759	4,386	6,145	29%
2010	2,108	4,734	6,842	31%
2012	2,326	5,165	7,491	31%
2014	2,755	5,426	8,181	34%
2015	3,222	5,633	8,855	36%
2017	3,310	5,632	8,942	37%
2019	3,313	5,656	8,969	37%
2021	3,409	5,668	9,105	38%

**Figure 5: Covered and Uncovered Bike Parking Capacity Change Over Time**



### Utilization Survey

The utilization survey was conducted between 10 a.m. and 12 p.m. on Tuesday, October 26 and Wednesday, October 27. The weather conditions on the days of the survey were good for biking. Both days had similar weather, with temperatures in the mid 50’s with partial cloud cover, and minimal precipitation.

### Campus Wide Utilization

The 2021 utilization survey found the average campus wide bike parking utilization was 18 percent. This utilization rate is 15 percent lower than the utilization rate observed in 2019, and the lowest utilization rate measured in the history of the bike parking utilization survey. Values for all years are shown in **Table 5: OSU Bike Parking Utilization 2008-2021**. As in previous years, numerous locations had utilization rates in excess of 100 percent, though fewer locations had the excessively high utilization rates than were observed in previous years. Eight (8) locations had utilization rates of 75 percent or greater. In 2019 there were 26 locations with excessive utilization. Details on the 2021 highest utilization locations are provided in **Appendix F: Highest Utilized Sites Map and Report**. Like previous years, locations with the highest utilization rates were concentrated around residence halls. The utilization survey measured the highest rates of utilization near Poling and Cauthorn Hall. Campus wide bike Parking Utilization by site is mapped in **Appendix G: Bike Parking Utilization Map**.

**Table 5: OSU Bike Parking Utilization 2008-2019**

Survey Year	Campus Wide Capacity	Utilized Spaces	Percent Utilization
2008	6,145	2,742	44%
2010	6,842	5,029	74%
2012	7,491	4,146	55%
2014	8,178	4,241	54%
2015	8,855	4,826	55%
2017	8,942	3,778	42%
2019	8,969	2,976	33%
2021	9,105	1,670	18%

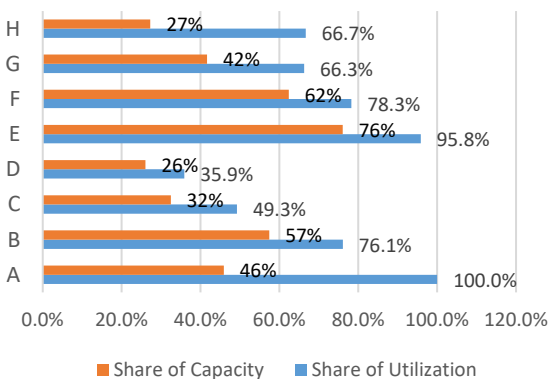
**Capacity Share vs Utilization Share**

Each type of bicycle parking facility represents a portion or share of the overall campus bike parking capacity. The capacity share for each parking facility differs across sectors, where one area of campus may offer a greater number of one type of bike parking facility than another (Figure 3). Overall, the OSU campus provides primarily hoop rack bicycle parking, and the majority of campus bike parking is either covered or uncovered hoop racks (Figure 2). The utilization of each type of bicycle parking facility represents a portion or share of overall campus bike parking utilization.

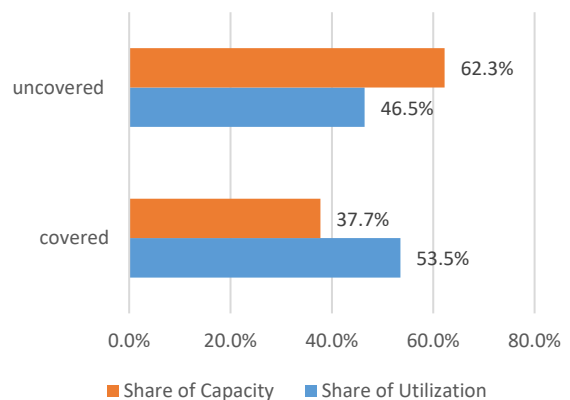
Comparing bicycle parking capacity share to bike parking utilization share for a given type of bike parking facility illustrates the intensity of bike facility utilization in comparison to facility availability. Where utilization share exceeds capacity share for a given bike parking facility type it indicates that type of bike parking facility receives a disproportionate intensity of use. The 2021 bike parking survey demonstrated that the utilization share exceeded capacity share for covered hoops in individual campus sectors as well as across campus as a whole (Figure 6 and Figure 7).

Covered bike parking represents 37.7 percent of campus wide bike parking capacity and it accounts for 53.5 percent of campus wide utilization. Sector covered bike parking capacity share varies from 26 percent to 76 percent of bike parking capacity, per campus sector. Similarly the share of utilization of covered bike parking varies from 35% to 100% of covered bike parking, per campus sector. In all campus sectors the share of utilization exceeded the share of capacity for covered bike parking, indicating a disproportionate intensity of use for the covered bike parking.

**Figure 6: Covered Bike Parking Capacity Share Compared with Utilization Share**



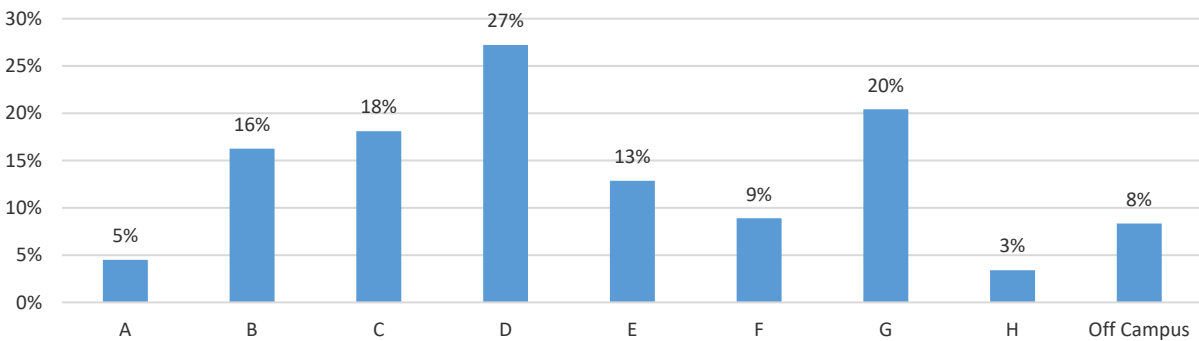
**Figure 7: Bike Parking Capacity Share Compared with Utilization Share**



**Sector Utilization**

Sectors B, C, D and G have the highest percent utilization, have the highest bike parking capacity, and contain the campus core buildings and student housing. The bike parking survey is scheduled late morning, in October of fall term to capture peak utilization in these sectors. Sectors A, E, F and H contain primarily agricultural spaces, athletic facilities, and event facilities (**Figure 8**). These locations, especially the athletic and event facilities, experience much higher rates of utilization during events, outside of the regular academic schedule. To accurately evaluate the utilization of bike parking at these locations, surveys would need to be conducted during special events. Complete Site and Sector capacity and utilization data are provided in **Appendix H: Detailed Survey Report**.

**Figure 8: Sector Percent Utilization**



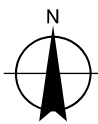
**Additional Information/Contacts.**

For additional information, please contact:

- Susan Padgett, Campus Planner  
541-737-6911, [susan.padgett@oregonstate.edu](mailto:susan.padgett@oregonstate.edu)
- Bob Richardson, Campus Planning Manager  
541-737-8503, [bob.richardson@oregonstate.edu](mailto:bob.richardson@oregonstate.edu)

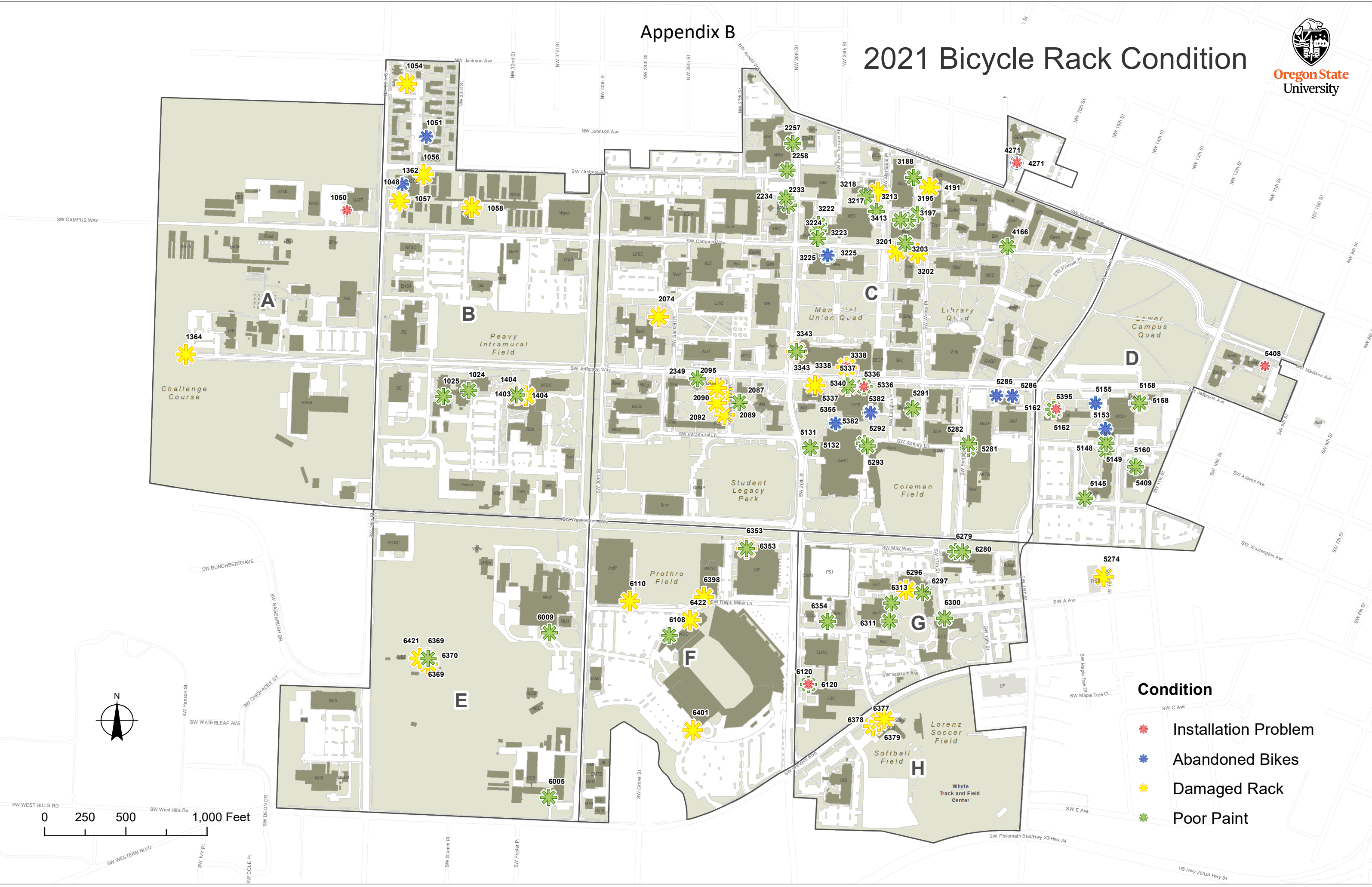
## Appendices

- A- Bicycle Survey Sections
- B- Condition Map and Report
- C- Bicycle Parking Capacity Map
- D- Hoop Type Map
- E- Cover Type Map
- F- Highest Utilized Sites Map and Report
- G- Bike Parking Utilization Map
- H- Detailed Survey Report



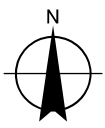
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 SW WEST HILLS RD  
 SW BUNCHBERRY AVE  
 SW WATERLEAF AVE  
 SW HANSON ST  
 SW COLE PL  
 SW IVY PL  
 SW WESTERN BLVD  
 SW JACKSON AVE  
 NW 32nd ST  
 NW 31st ST  
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 NW 29th ST  
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 SW JEFFERSON WAY  
 SW JEFFERSON AVE  
 SW ADAMS AVE  
 SW WASHINGTON AVE  
 SW MAY WAY  
 SW A AVE  
 SW C AVE  
 SW E AVE  
 SW PHILMATH BLVD/Hwy 20/Hwy 34  
 SW GROVE ST  
 SW WESTERN BLVD  
 SW STAMM PL  
 SW POPLAR PL  
 SW COLE PL  
 SW IVY PL  
 SW WESTERN BLVD

# 2021 Bicycle Rack Condition



- Condition**
- ★ Installation Problem
  - ★ Abandoned Bikes
  - ★ Damaged Rack
  - ★ Poor Paint

0 250 500 1,000 Feet



Abandoned Bikes	
Location ID	Abandoned Bikes
1051	y
1362	y
3225	y
4271	y
5153	y
5155	y
5285	y
5286	y
5355	y
5382	y

Damaged / Unanchored Racks	
Location ID	Damaged/Unanchored
1048	y
1054	y
1056	y
1057	y
1058	y
1364	y
1403	y
1404	y
2074	y
2089	y
2090	y
2092	y
2095	y
3202	y
3203	y
3217	y
3338	y
3343	y
4191	y
5158	y
5162	y
5274	y
5337	y
5340	y
6110	y
6296	y
6353	y
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6379	y
6398	y
6401	y
6421	y
6422	y
6425	y

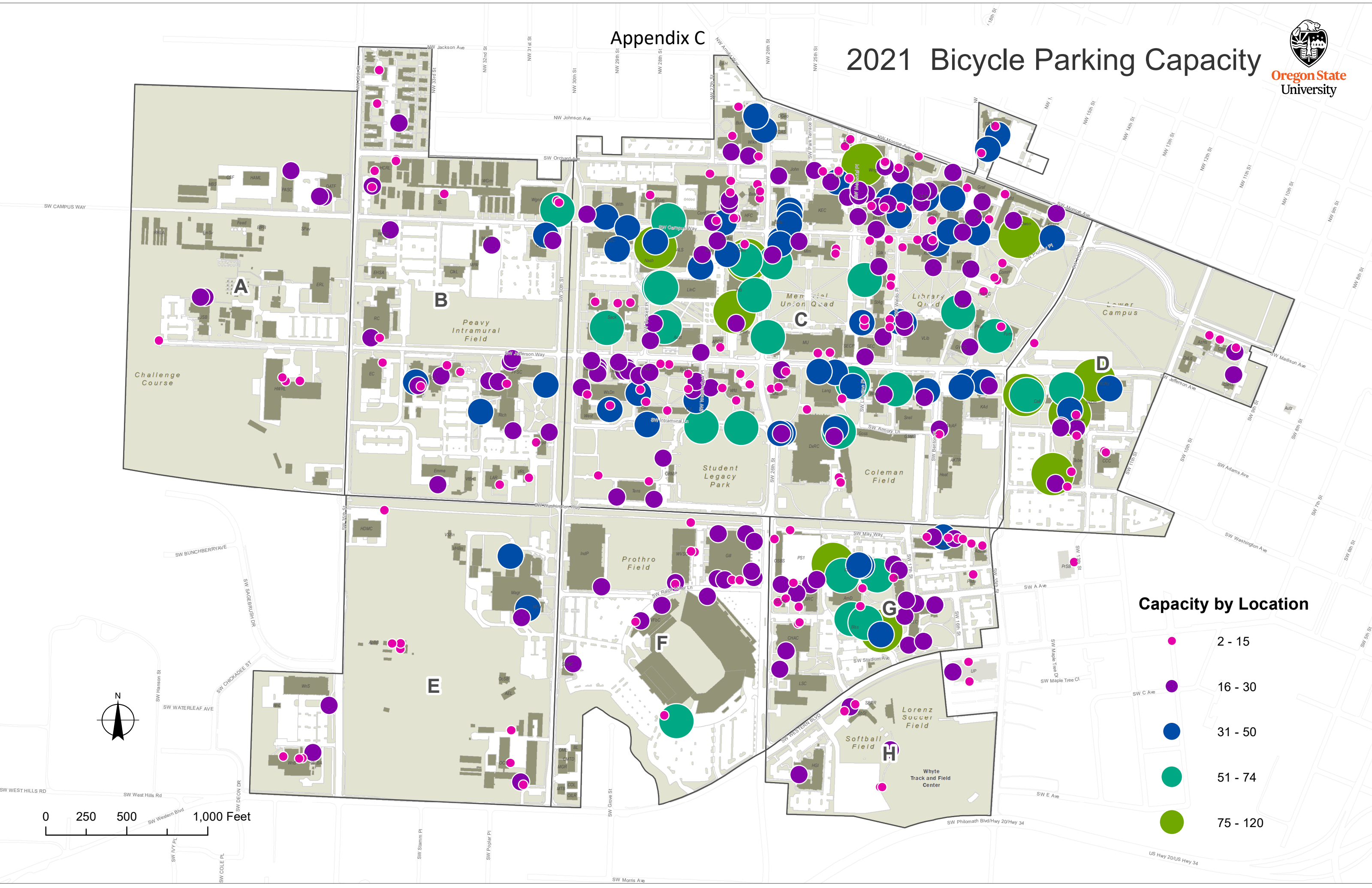
Rack Installation Problems	
Location ID	Install Problem
1050	y
3338	y
4271	y
5336	y
5395	y
5408	y
6120	y

Bikes out of Racks	
Location ID	Bikes out of Racks
2253	y
3386	y
5154	y

Paint Issues	
Location ID	Paint Condition
1024	poor
1025	poor
1404	poor
2087	poor
2233	poor
2234	poor
2257	poor
2258	poor
2349	poor
3188	poor
3195	poor
3197	poor
3201	poor
3213	poor
3218	poor
3222	poor
3223	poor
3224	poor
3225	poor
3343	poor
3413	poor
4166	poor
5131	poor
5132	poor
5145	poor
5148	poor
5149	poor
5158	poor
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5293	poor
5336	poor
5337	poor
5382	poor

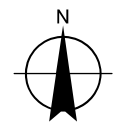
Paint Issues (continued)	
Location ID	Paint Condition
5409	poor
6005	poor
6009	poor
6108	poor
6120	poor
6279	poor
6280	poor
6297	poor
6300	poor
6311	poor
6313	poor
6353	poor
6354	poor
6369	poor

# 2021 Bicycle Parking Capacity



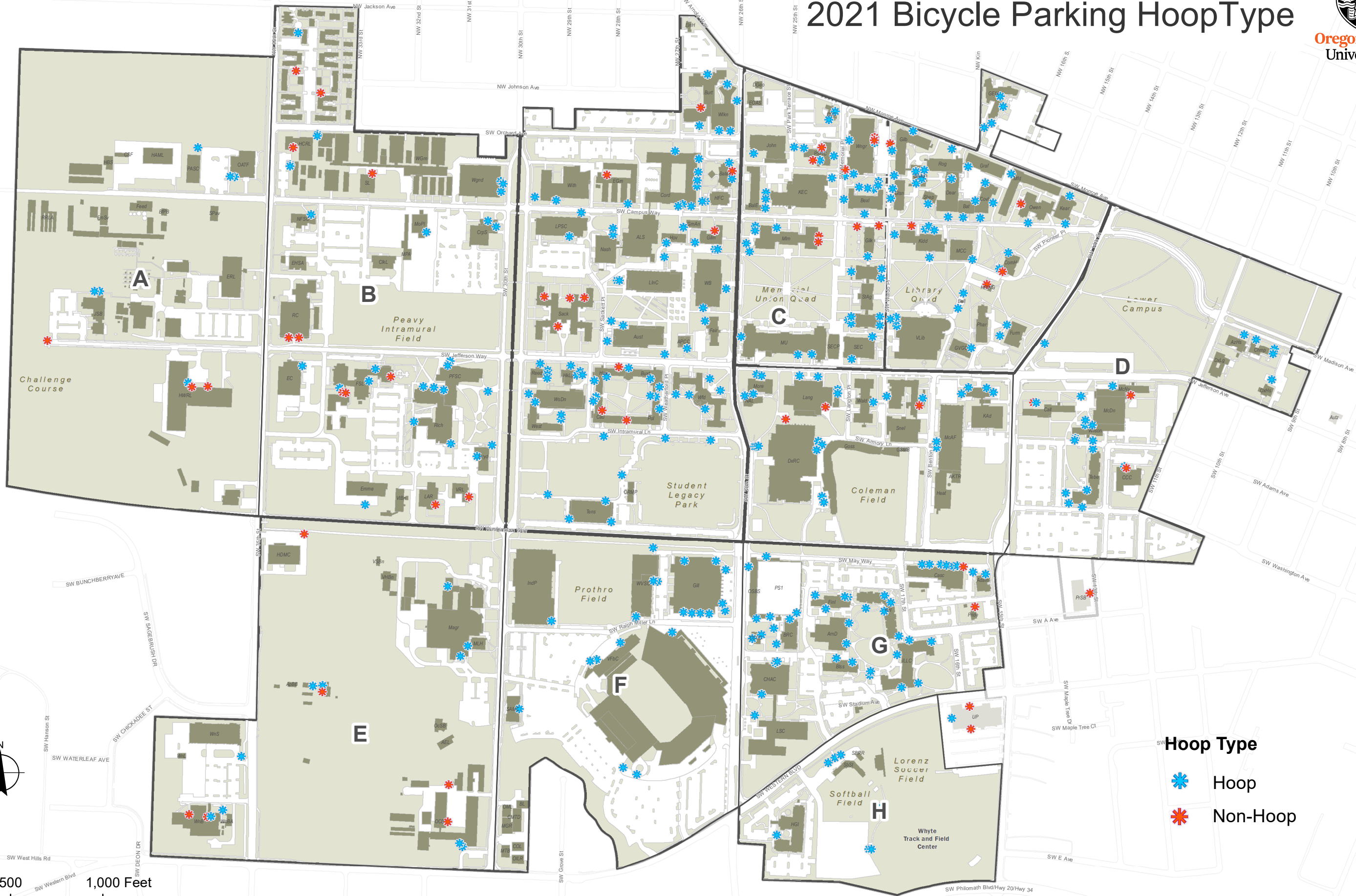
Capacity by Location

- 2 - 15
- 16 - 30
- 31 - 50
- 51 - 74
- 75 - 120



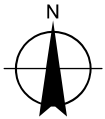


# 2021 Bicycle Parking HoopType

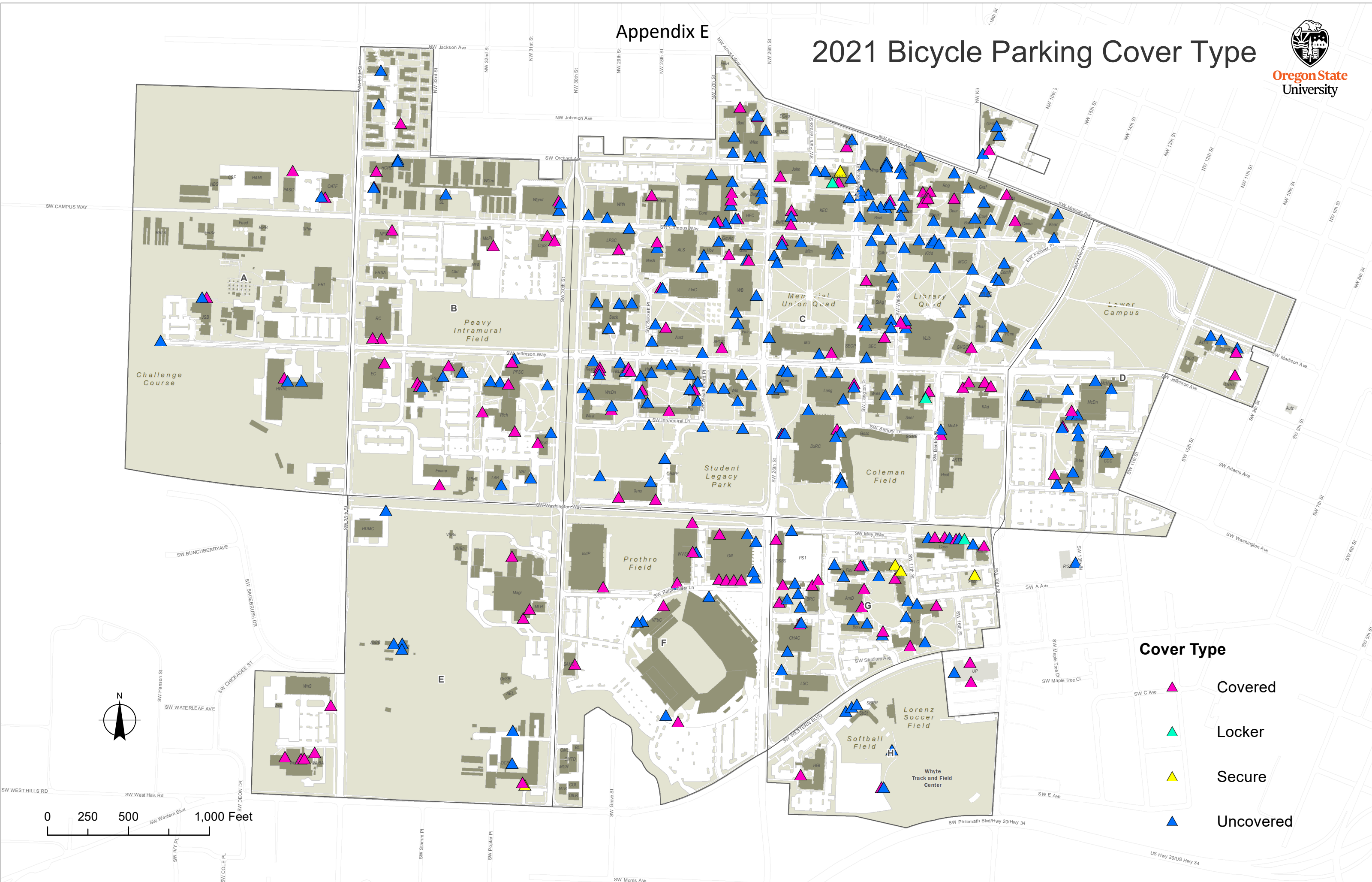


**Hoop Type**





- Hoop
- Non-Hoop



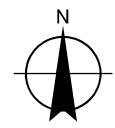
# 2021 Bicycle Parking Cover Type



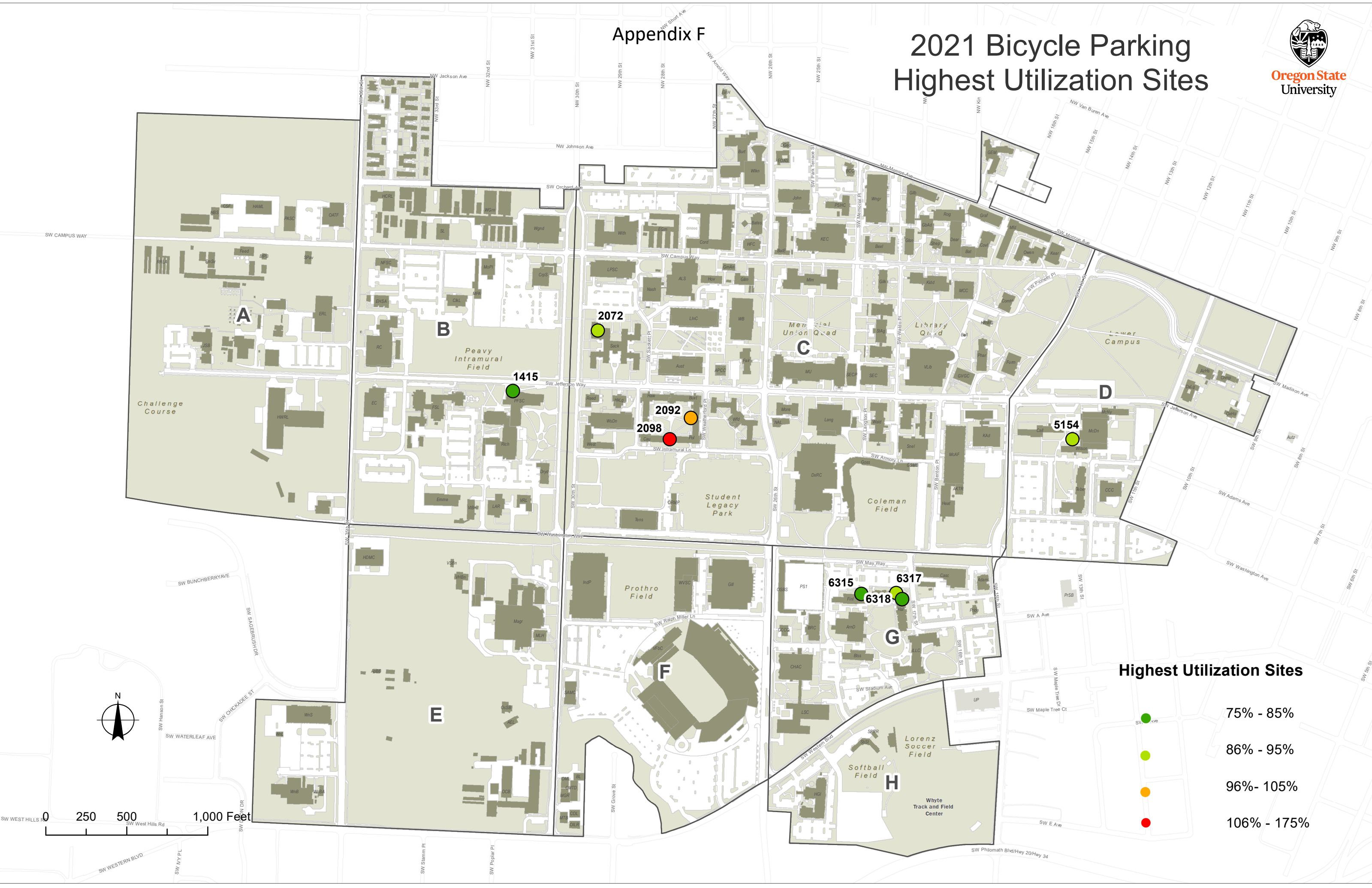
### Cover Type

-  Covered
-  Locker
-  Secure
-  Uncovered

0 250 500 1,000 Feet

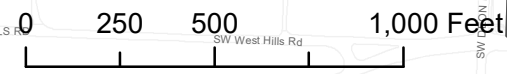
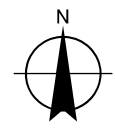


# 2021 Bicycle Parking Highest Utilization Sites



### Highest Utilization Sites

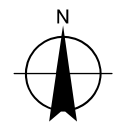
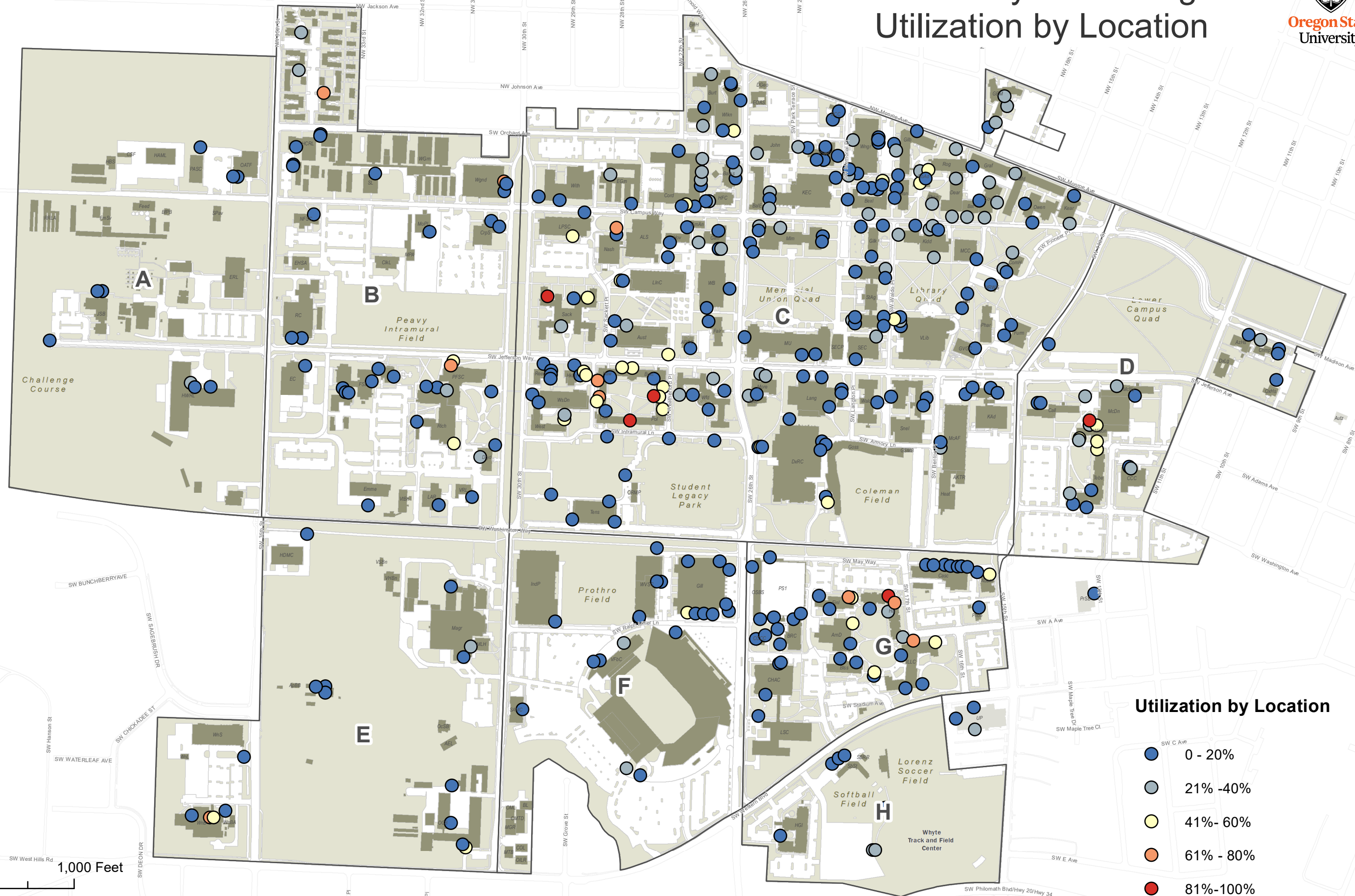
- 75% - 85%
- 86% - 95%
- 96% - 105%
- 106% - 175%



**Sites with Utilization of 75% or Greater**

<b>Location ID</b>	<b>Type</b>	<b>OSU Hoop</b>	<b>CMP Sector</b>	<b>Capacity</b>	<b>Percent Utilization</b>
2098	Covr	N	C	14	100%
2092	UnCovr	Y	C	15	93%
2072	UnCovr	N	C	7	86%
5154	Covr	Y	D	40	84%
6317	Covr	Y	G	22	82%
6315	Covr	Y	G	35	80%
1415	Covr	Y	B	26	75%
6318	Covr	Y	G	20	75%

# 2021 Bicycle Parking Utilization by Location



### Utilization by Location

- 0 - 20%
- 21% - 40%
- 41% - 60%
- 61% - 80%
- 81% - 100%

SW CAMPUS WAY  
SW BUNCHBERRY AVE  
SW WATERLEAF AVE  
SW WEST HILLS RD  
SW WESTERN BLVD  
SW HANSON ST  
SW CHICKADEE ST  
SW SACERUSH DR  
SW DEON DR  
SW COLE PL  
SW IVY PL  
SW STAMEN PI  
SW POPLAR PI  
SW GROVE ST  
SW MAY WAY  
SW STADIUM AVE  
SW PHILMATH BLVD/Hwy 20/Hwy 34  
SW A AVE  
SW MAPLE TREE CT  
SW E AVE  
SW 9th ST  
SW 10th ST  
SW 11th ST  
SW 12th ST  
SW 13th ST  
SW 14th ST  
SW 15th ST  
SW 16th ST  
SW 17th ST  
SW 18th ST  
SW 19th ST  
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SW 24th ST  
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SW 31st ST  
SW 32nd ST  
SW 33rd ST  
SW 34th ST  
SW 35th ST  
SW 36th ST  
SW 37th ST  
SW 38th ST  
SW 39th ST  
SW 40th ST  
SW 41st ST  
SW 42nd ST  
SW 43rd ST  
SW 44th ST  
SW 45th ST  
SW 46th ST  
SW 47th ST  
SW 48th ST  
SW 49th ST  
SW 50th ST

# Appendix H

## Capacity

Section	Total Capacity	Covered	Uncovered	Hoops	Non-Hoops	Covered Hoops	Uncovered Hoops	Covered Non-Hoops	Uncovered Non-Hoops
<b>Campus Wide</b>	9,105	3,437	5,668	8,263	842	3,200	5,063	237	605
A	122	56	66	92	30	56	36	0	30
B	707	406	301	565	142	316	249	90	52
C	5,590	1,815	3,775	5,225	365	1,710	3,515	105	260
D	814	212	602	662	152	212	450	0	152
E	280	213	67	228	52	204	24	9	43
F	388	242	146	388	0	242	146	0	0
G	1,068	445	623	999	69	436	563	9	60
H	88	24	64	88	0	24	64	0	0
<b>Off Campus</b>	48	24	24	16	32	0	16	24	8

## Utilization

Sections	Total Utilization	Covered	Uncovered	Hoops	Non-Hoops	Covered Hoops	Uncovered Hoops	Covered Non-Hoops	Uncovered Non-Hoops
<b>Campus Wide</b>	1650	883	767	1558	92	838	720	46	47
A	5.5	5.5	0.0	5.5	0.0	5.5	0.0	0.0	0.0
B	115.0	87.5	27.5	90.5	24.5	67.0	23.5	20.5	4.0
C	1012.0	498.5	513.5	958.0	54.0	479.5	478.5	19.0	35.0
D	221.5	79.5	142.0	219.0	2.5	79.5	139.5	0.0	2.5
E	36.0	34.5	1.5	32.5	3.5	32.5	0.0	2.0	1.5
F	34.5	27.0	7.5	34.5	0.0	27.0	7.5	0.0	0.0
G	218.0	144.5	73.5	214.5	3.5	144.5	70.0	0.0	3.5
H	3.0	2.0	1.0	3.0	0.0	2.0	1.0	0.0	0.0
<b>Off Campus</b>	4.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0

### Sector A

Location ID	Sector	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
1044	A	Covr	Y	4	1	2	38%	0	0	0	n	
1045	A	UnCovr	N	11	0	0	0%	0	0	0	n	
1046	A	Covr	Y	20	3	3	15%	0	0	0	n	
1049	A	Covr	Y	16	0	0	0%	0	0	0	n	
1050	A	UnCovr	Y	16	0	0	0%	0	0	y	n	
1363	A	UnCovr	Y	20	0	0	0%	0	0	0	n	
1364	A	UnCovr	N	14	0	0	0%	0	y	0	n	
1409	A	Covr	Y	16	1	1	6%	0	0	0	n	
1412	A	UnCovr	N	5	0	0	0%	0	0	0	n	

### Sector B

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
1011	B	UnCovr	N	6	0	0	0%	0	0	0	0	0
1012	B	Covr	Y	10	3	2	25%	0	0	0	0	0
1013	B	UnCovr	Y	20	1	0	3%	0	0	0	0	0
1015	B	Covr	Y	20	11	6	43%	0	0	0	0	0
1016	B	Covr	Y	40	6	5	14%	0	0	0	0	0
1023	B	UnCovr	N	7	0	0	0%	0	0	0	0	0
1024	B	UnCovr	Y	21	0	0	0%	0	0	0	0	0
1025	B	Covr	Y	34	4	3	10%	0	0	0	0	0
1026	B	Covr	N	28	0	0	0%	0	0	0	0	0
1027	B	UnCovr	N	14	0	0	0%	0	0	0	0	0
1028	B	Covr	Y	6	1	1	17%	0	0	0	0	0
1029	B	Covr	N	7	0	2	14%	0	0	0	0	0
1030	B	Covr	N	21	3	0	7%	0	0	0	0	poor
1031	B	Covr	Y	14	0	0	0%	0	0	0	0	poor
1047	B	Covr	Y	20	0	2	5%	0	0	0	0	0
1048	B	Covr	Y	16	3	2	16%	0	y	0	0	0
1051	B	Covr	N	26	17	17	65%	y	0	0	0	0
1052	B	UnCovr	N	13	3	3	23%	0	0	0	0	0
1054	B	UnCovr	Y	10	3	2	25%	0	y	0	0	0
1055	B	UnCovr	Y	11	1	0	5%	0	0	0	0	0
1056	B	UnCovr	Y	8	0	0	0%	0	y	0	0	0
1057	B	UnCovr	Y	5	0	0	0%	0	y	0	0	0
1058	B	UnCovr	N	7	1	1	14%	0	y	0	0	0
1059	B	Covr	Y	14	10	10	71%	0	0	0	0	0
1060	B	UnCovr	Y	60	8	4	10%	0	0	0	0	0
1061	B	UnCovr	Y	6	1	1	17%	0	0	0	0	0
1062	B	Covr	Y	40	8	6	18%	0	0	0	0	0

1063	B	Covr	Y	24	4	3	15%	0	0	0	0	0
1070	B	Covr	Y	24	0	0	0%	0	0	0	0	0
1362	B	Covr	N	8	1	1	13%	y	0	0	0	0
1403	B	UnCovr	Y	20	0	0	0%	0	y	0	0	0
1404	B	UnCovr	Y	30	0	0	0%	0	y	0	0	0
1411	B	UnCovr	N	5	0	0	0%	0	0	0	0	0
1413	B	Covr	Y	20	0	0	0%	0	0	0	0	0
1414	B	UnCovr	Y	20	8	10	45%	0	0	0	0	0
1415	B	Covr	Y	26	20	19	75%	0	0	0	0	0
1416	B	UnCovr	Y	38	4	4	11%	0	0	0	0	0
1417	B	Covr	Y	8	3	2	31%	0	0	0	0	poor

**Sector C**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
1414	B	UnCovr	Y	20	8	10	45%	0	0	0	0	0
1415	B	Covr	Y	26	20	19	75%	0	0	0	0	0
1416	B	UnCovr	Y	38	4	4	11%	0	0	0	0	0
1417	B	Covr	Y	8	3	2	31%	0	0	0	0	0
2032	C	UnCovr	Y	16	0	1	3%	0	0	0	0	0
2033	C	Covr	Y	20	2	2	10%	0	0	0	0	0
2034	C	Covr	Y	20	1	2	8%	0	0	0	0	0
2035	C	UnCovr	Y	20	0	1	3%	0	0	0	0	0
2036	C	UnCovr	Y	16	1	1	6%	0	0	0	0	0
2037	C	UnCovr	Y	24	0	1	2%	0	0	0	0	0
2038	C	Covr	Y	20	9	10	48%	0	0	0	0	0
2039	C	Covr	Y	20	9	9	45%	0	0	0	0	0
2040	C	UnCovr	Y	16	10	10	63%	0	0	0	0	0
2041	C	Covr	Y	10	8	6	70%	0	0	0	0	0
2042	C	UnCovr	Y	50	27	30	57%	0	0	0	0	0
2064	C	UnCovr	Y	18	1	0	3%	0	0	0	0	0
2065	C	UnCovr	Y	50	7	5	12%	0	0	0	0	0
2066	C	UnCovr	Y	34	4	8	18%	0	0	0	0	0
2067	C	UnCovr	Y	84	5	10	9%	0	0	0	0	0
2068	C	Covr	Y	48	32	28	63%	0	0	0	0	0
2069	C	Covr	Y	34	10	19	43%	0	0	0	0	0
2072	C	UnCovr	N	7	6	6	86%	0	0	0	0	0
2073	C	UnCovr	N	14	1	1	7%	0	0	0	0	0
2074	C	UnCovr	N	7	4	3	50%	0	0	0	0	0
2075	C	UnCovr	N	53	14	15	27%	0	y	0	0	0
2076	C	UnCovr	Y	20	1	3	10%	0	0	0	0	0
2077	C	UnCovr	Y	20	1	2	8%	0	0	0	0	0
2078	C	Covr	Y	68	20	27	35%	0	0	0	0	0
2079	C	UnCovr	Y	20	14	10	60%	0	0	0	0	0
2080	C	Covr	Y	6	0	0	0%	0	0	0	0	0
2081	C	UnCovr	Y	88	4	5	5%	0	0	0	0	poor
2084	C	UnCovr	Y	10	3	4	35%	0	0	0	0	0
2085	C	UnCovr	Y	10	2	1	15%	0	0	0	0	0
2086	C	UnCovr	Y	10	1	1	10%	0	0	0	0	0
2087	C	UnCovr	Y	30	7	6	22%	0	0	0	0	0
2088	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0
2089	C	UnCovr	Y	48	27	27	56%	0	0	0	0	0
2090	C	UnCovr	Y	19	7	9	42%	0	y	0	0	0
2091	C	Covr	Y	24	14	14	58%	0	y	0	0	0
2092	C	UnCovr	Y	15	14	14	93%	0	0	0	0	0
2095	C	UnCovr	Y	11	1	2	14%	0	y	0	0	0
2096	C	UnCovr	Y	16	0	0	0%	0	y	0	0	0
2097	C	UnCovr	N	14	2	2	14%	0	0	0	0	0
2098	C	Covr	N	14	14	14	100%	0	0	0	0	0
2127	C	Covr	Y	32	18	18	56%	0	0	0	0	0
2128	C	UnCovr	Y	8	1	4	31%	0	0	0	0	0
2129	C	UnCovr	Y	56	1	1	2%	0	0	0	0	0
2130	C	UnCovr	Y	60	0	0	0%	0	0	0	0	0
2136	C	Covr	Y	20	0	0	0%	0	0	0	0	0
2137	C	Covr	Y	20	1	2	8%	0	0	0	0	0
2138	C	UnCovr	Y	6	0	0	0%	0	0	0	0	0
2139	C	UnCovr	Y	32	1	1	3%	0	0	0	0	0
2140	C	UnCovr	Y	20	0	0	0%	0	0	0	0	0
2141	C	UnCovr	Y	10	0	0	0%	0	0	0	0	poor
2142	C	UnCovr	Y	24	0	0	0%	0	0	0	0	poor
2143	C	UnCovr	Y	65	5	1	5%	0	0	0	0	0
2232	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0
2233	C	UnCovr	N	2	1	0	25%	0	0	0	0	0
2234	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0

2236	C	Covr	Y	8	1	3	25%	0	0	0	0	0
2237	C	UnCovr	Y	8	0	0	0%	0	0	0	0	0
2238	C	UnCovr	Y	36	7	5	17%	0	0	0	0	0
2239	C	Covr	Y	6	4	1	42%	0	0	0	0	0
2240	C	UnCovr	Y	20	4	3	18%	0	0	0	0	0
2241	C	UnCovr	Y	20	1	2	8%	0	0	0	0	0
2242	C	Covr	Y	48	13	17	31%	0	0	0	0	0
2243	C	UnCovr	Y	20	0	0	0%	0	0	0	0	0
2244	C	UnCovr	Y	30	2	2	7%	0	0	0	0	0
2247	C	Covr	Y	18	6	5	31%	0	0	0	y	0
2249	C	Covr	Y	14	4	5	32%	0	0	0	0	0
2250	C	UnCovr	Y	12	3	3	25%	0	0	0	0	0
2251	C	UnCovr	Y	70	0	9	6%	0	0	0	0	0
2253	C	Covr	N	12	5	2	29%	0	0	0	0	poor
2254	C	UnCovr	Y	10	0	0	0%	0	0	0	0	poor
2255	C	Covr	Y	32	9	8	27%	0	0	0	0	0
2256	C	UnCovr	Y	40	0	0	0%	0	0	0	0	0
2257	C	UnCovr	Y	46	10	4	15%	0	0	0	0	0
2258	C	UnCovr	Y	14	8	5	46%	0	0	0	0	0
2259	C	UnCovr	Y	18	3	1	11%	0	0	0	0	poor
2260	C	UnCovr	Y	26	5	8	25%	0	0	0	0	0
2264	C	UnCovr	N	14	0	0	0%	0	0	0	0	0
2265	C	Covr	Y	12	3	2	21%	0	0	0	0	0
2349	C	UnCovr	Y	6	3	4	58%	0	0	0	0	0
2350	C	UnCovr	Y	16	3	1	13%	0	0	0	0	0
2351	C	UnCovr	N	12	1	0	4%	0	0	0	0	0
2359	C	UnCovr	Y	4	0	0	0%	0	0	0	0	0
2390	C	Covr	Y	60	26	29	46%	0	0	0	0	0
2391	C	UnCovr	Y	60	0	23	19%	0	0	0	0	0
2392	C	UnCovr	Y	40	6	10	20%	0	0	0	0	0
2393	C	UnCovr	Y	60	0	2	2%	0	0	0	0	0
2394	C	Covr	Y	120	22	39	25%	0	0	0	0	0
2414	C	UnCovr	N	4	2	2	50%	0	0	0	0	poor
3185	C	UnCovr	Y	30	2	7	15%	0	0	0	0	0
3187	C	UnCovr	Y	16	0	0	0%	0	0	0	0	poor
3188	C	UnCovr	Y	10	1	2	15%	0	0	0	0	0
3189	C	UnCovr	N	7	0	0	0%	0	0	0	0	poor
3195	C	Covr	Y	48	19	22	43%	0	0	0	0	0
3196	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0
3197	C	UnCovr	Y	20	0	0	0%	0	0	0	0	poor
3199	C	UnCovr	Y	18	3	8	31%	0	0	0	0	0
3200	C	UnCovr	Y	30	4	5	15%	0	0	0	0	0
3201	C	UnCovr	Y	29	2	11	22%	0	0	0	0	0
3202	C	UnCovr	N	13	1	0	4%	0	0	0	0	0
3203	C	UnCovr	N	11	0	1	5%	0	y	0	0	0
3210	C	UnCovr	Y	26	2	3	10%	0	y	0	0	poor
3211	C	UnCovr	N	7	0	0	0%	0	0	0	0	0
3212	C	UnCovr	N	7	0	0	0%	0	0	0	0	0
3213	C	UnCovr	Y	24	4	2	13%	0	0	0	0	0
3214	C	UnCovr	N	16	0	5	16%	0	0	0	0	0
3215	C	UnCovr	Y	80	16	18	21%	0	0	0	0	poor
3216	C	Covr	Y	6	0	1	8%	0	0	0	0	0
3217	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0
3218	C	Covr	Y	48	1	1	2%	0	y	0	0	0
3219	C	UnCovr	Y	10	0	0	0%	0	0	0	0	poor
3220	C	Covr	Y	10	6	5	55%	0	0	0	0	poor
3221	C	Covr	N	8	0	0	0%	0	0	0	0	poor
3222	C	Covr	Y	40	13	13	33%	0	0	0	0	poor
3223	C	UnCovr	Y	40	0	3	4%	0	0	0	0	0
3224	C	Covr	Y	40	12	14	33%	0	0	0	0	0
3225	C	UnCovr	Y	24	7	7	29%	0	0	0	0	0
3226	C	Covr	Y	48	17	21	40%	y	0	0	0	0
3227	C	UnCovr	Y	38	1	0	1%	0	0	0	0	0
3228	C	UnCovr	Y	20	0	0	0%	0	0	0	0	0
3267	C	UnCovr	Y	60	3	2	4%	0	0	0	0	0
3267	C	Covr	N	28	0	0	0%	0	0	0	0	0
3331	C	Covr	Y	20	7	6	0%	0	0	0	0	0
3332	C	Covr	Y	50	24	13	37%	0	0	0	0	poor
3333	C	UnCovr	Y	26	1	0	2%	0	0	0	0	0
3338	C	UnCovr	Y	15	0	1	3%	0	0	0	0	0
3343	C	UnCovr	Y	54	6	7	12%	0	y	y	0	0
3352	C	UnCovr	Y	4	0	0	0%	0	y	0	0	0
3358	C	UnCovr	Y	20	0	1	3%	0	0	0	0	0



3374	C	UnCovr	N	13	0	0	0%	0	0	0	0	0
3375	C	UnCovr	Y	14	0	1	4%	0	0	0	y	0
3376	C	UnCovr	Y	14	0	0	0%	0	0	0	0	0
3385	C	UnCovr	Y	10	3	3	30%	0	0	0	0	0
3386	C	UnCovr	Y	8	1	1	13%	0	0	0	0	0
3387	C	UnCovr	Y	10	0	1	5%	0	0	0	0	0
3388	C	UnCovr	Y	8	0	2	13%	0	0	0	0	0
3389	C	Covr	Y	52	4	2	6%	0	0	0	0	poor
3401	C	Covr	Y	30	10	14	40%	0	0	0	0	0
3402	C	UnCovr	Y	20	4	7	28%	0	0	0	0	0
3413	C	UnCovr	Y	6	0	0	0%	0	0	0	0	0
4163	C	UnCovr	Y	50	11	10	21%	0	0	0	0	poor
4164	C	UnCovr	Y	86	6	6	7%	0	0	0	0	0
4165	C	Covr	N	23	2	1	7%	0	0	0	0	0
4166	C	UnCovr	Y	40	11	13	30%	0	0	0	0	0
4167	C	UnCovr	Y	18	3	7	28%	0	0	0	0	0
4168	C	UnCovr	Y	40	12	12	30%	0	0	0	0	0
4169	C	UnCovr	Y	10	3	4	35%	0	0	0	0	0
4170	C	Covr	Y	28	14	14	50%	0	0	0	0	0
4171	C	Covr	Y	20	9	5	35%	0	0	0	0	0
4174	C	Covr	Y	34	10	9	28%	0	0	0	0	0
4175	C	UnCovr	Y	10	1	0	5%	0	0	0	0	0
4176	C	UnCovr	Y	19	0	1	3%	0	0	0	0	0
4177	C	UnCovr	Y	20	7	4	28%	0	0	0	0	0
4178	C	Covr	Y	6	1	3	33%	0	0	0	0	0
4179	C	UnCovr	Y	10	3	4	35%	0	0	0	0	0
4180	C	UnCovr	Y	14	5	3	29%	0	0	0	0	0
4181	C	UnCovr	Y	10	3	3	30%	0	0	0	0	0
4182	C	UnCovr	N	12	1	1	8%	0	0	0	0	0
4183	C	UnCovr	N	2	0	0	0%	0	0	0	0	0
4184	C	UnCovr	Y	20	3	4	18%	0	0	0	0	0
4190	C	UnCovr	N	7	0	0	0%	0	0	0	0	0
4191	C	UnCovr	Y	26	12	8	38%	0	0	0	0	0
4192	C	UnCovr	Y	42	4	3	8%	0	y	0	0	0
4193	C	UnCovr	Y	10	0	0	0%	0	0	0	0	0
4194	C	UnCovr	Y	40	4	6	13%	0	0	0	0	0
4204	C	UnCovr	Y	10	2	3	25%	0	0	0	0	0
4205	C	UnCovr	N	14	0	0	0%	0	0	0	0	0
4206	C	UnCovr	Y	21	5	8	31%	0	0	0	0	0
4207	C	UnCovr	Y	10	2	3	25%	0	0	0	0	0
4208	C	UnCovr	Y	44	2	11	15%	0	0	0	0	0
4209	C	UnCovr	Y	26	3	11	27%	0	0	0	0	0
4268	C	Covr	Y	28	17	14	55%	0	0	0	0	0
4269	C	UnCovr	Y	18	6	2	22%	0	0	0	0	0
4270	C	UnCovr	Y	12	0	0	0%	0	0	0	0	0
4271	C	Covr	Y	40	12	10	28%	0	0	0	0	0
4272	C	UnCovr	Y	44	10	9	22%	y	0	y	0	0
4273	C	UnCovr	Y	26	1	3	8%	0	0	0	0	0
4321	C	UnCovr	Y	12	0	0	0%	0	0	0	0	0
4322	C	UnCovr	Y	52	8	6	13%	0	0	0	0	0
4324	C	Covr	Y	30	0	0	0%	0	0	0	0	0
4325	C	UnCovr	Y	56	6	6	11%	0	0	0	0	0
4326	C	UnCovr	Y	30	1	0	2%	0	0	0	0	0
4327	C	UnCovr	Y	16	0	0	0%	0	0	0	0	0
4328	C	Covr	Y	48	19	12	32%	0	0	0	0	0
4329	C	UnCovr	Y	16	1	1	6%	0	0	0	0	0
4330	C	Covr	Y	48	23	21	46%	0	0	0	0	0
4346	C	UnCovr	Y	8	2	0	13%	0	0	0	0	poor
4380	C	UnCovr	Y	12	3	3	25%	0	0	0	0	poor
4412	C	Covr	Y	34	2	0	3%	0	0	0	0	0
5131	C	UnCovr	Y	38	6	4	13%	0	0	0	0	poor
5132	C	Covr	Y	28	16	12	50%	0	0	0	0	poor
5133	C	UnCovr	Y	48	1	5	6%	0	0	0	0	0
5281	C	Covr	Y	10	0	1	25%	0	0	0	0	0
5282	C	UnCovr	Y	20	33	0	0%	0	0	0	0	0
5283	C	Covr	Y	44	0	3	8%	0	0	0	0	0
5284	C	Covr	Y	32	6	0	0%	0	0	0	0	0
5285	C	Covr	Y	48	8	4	9%	0	0	0	0	0
5286	C	Covr	Y	48	2	2	4%	y	0	0	0	poor
5287	C	Covr	Y	26	1	1	4%	y	0	0	0	poor
5290	C	UnCovr	Y	54	2	4	6%	0	0	0	0	poor
5291	C	UnCovr	Y	16	2	2	13%	0	0	0	0	0
5292	C	Covr	Y	40	4	3	9%	0	0	0	0	0

5293	C	UnCovr	Y	56	1	1	2%	0	0	0	0	0
5294	C	UnCovr	Y	10	0	0	0%	0	0	0	0	poor
5334	C	Covr	Y	64	7	12	15%	0	0	0	0	poor
5335	C	UnCovr	Y	32	0	0	0%	0	0	0	0	0
5336	C	UnCovr	Y	40	2	4	8%	0	0	0	0	0
5337	C	UnCovr	Y	35	1	4	7%	0	0	y	0	0
5339	C	UnCovr	Y	20	2	7	23%	0	y	0	0	0
5340	C	UnCovr	Y	14	2	4	21%	0	0	0	0	0
5341	C	UnCovr	Y	4	1	1	25%	0	y	0	0	0
5342	C	UnCovr	Y	4	0	0	0%	0	0	0	0	poor
5355	C	UnCovr	N	14	1	0	4%	0	0	0	0	0
5381	C	UnCovr	Y	20	2	3	13%	y	0	0	0	0
5382	C	UnCovr	N	10	0	0	0%	0	0	0	0	poor
5399	C	Covr	N	20	0	0	0%	y	0	0	0	0
5410	C	UnCovr	Y	10	10	0	50%	0	0	0	0	0

**Sector D**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
5145	D	UnCovr	Y	16	0	0	0%	0	0	0	0	poor
5146	D	Covr	Y	92	33	31	35%	0	0	0	0	0
5147	D	UnCovr	Y	10	0	0	0%	0	0	0	0	0
5148	D	UnCovr	Y	14	6	8	50%	0	0	0	0	poor
5149	D	UnCovr	Y	20	8	9	43%	0	0	0	0	poor
5150	D	Covr	Y	20	10	10	50%	0	0	0	0	0
5151	D	UnCovr	Y	20	7	7	35%	0	0	0	0	0
5152	D	UnCovr	Y	86	32	31	37%	0	0	0	0	0
5153	D	UnCovr	Y	8	4	4	50%	y	0	0	0	0
5154	D	Covr	Y	40	33	34	84%	0	0	0	y	0
5155	D	UnCovr	Y	68	25	26	38%	y	0	0	0	0
5156	D	UnCovr	Y	104	42	42	40%	0	0	0	0	0
5158	D	UnCovr	N	40	1	1	3%	0	y	0	0	poor
5160	D	UnCovr	Y	6	0	0	0%	0	0	0	0	poor
5161	D	UnCovr	Y	6	0	1	8%	0	0	0	0	0
5162	D	UnCovr	N	107	0	0	0%	0	y	0	0	poor
5323	D	UnCovr	Y	10	0	1	5%	0	0	0	0	0
5384	D	Covr	Y	30	4	4	13%	0	0	0	0	0
5395	D	UnCovr	Y	70	10	11	15%	0	0	y	0	0
5405	D	UnCovr	Y	6	1	1	17%	0	0	0	0	0
5406	D	UnCovr	Y	4	1	2	38%	0	0	0	0	0
5407	D	UnCovr	Y	2	0	0	0%	0	0	0	0	0
5408	D	Covr	Y	30	0	0	0%	0	0	y	0	0
5409	D	UnCovr	N	5	2	1	30%	0	0	0	0	poor

**Sector E**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
6004	E	Covr	Y	8	5	4	56%	0	0	0	0	0
6005	E	Covr	Y	26	1	2	6%	0	0	0	0	poor
6006	E	UnCovr	N	14	1	1	7%	0	0	0	0	0
6009	E	Covr	Y	29	4	4	14%	0	0	0	0	poor
6010	E	Covr	Y	39	15	10	32%	0	0	0	0	0
6043	E	Covr	N	3	2	2	67%	0	0	0	0	0
6348	E	UnCovr	N	6	0	0	0%	0	0	0	0	0
6368	E	UnCovr	N	13	0	1	4%	0	0	0	0	0
6369	E	UnCovr	Y	8	0	0	0%	0	y	0	0	poor
6370	E	UnCovr	N	10	0	0	0%	0	y	0	0	0
6371	E	Covr	N	6	0	0	0%	0	0	0	0	0
6372	E	Covr	Y	36	1	2	4%	0	0	0	0	0
6421	E	UnCovr	Y	6	0	0	0%	0	y	0	0	0
6425	E	UnCovr	Y	10	0	0	0%	0	y	0	0	0
6430	E	Covr	Y	10	5	6	55%	0	0	0	0	0
6431	E	Covr	Y	28	3	3	11%	0	0	0	0	0

**Sector F**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
6008	F	Covr	Y	20	1	0	3%	0	0	0	0	0
6100	F	Covr	Y	20	14	9	58%	0	0	0	0	0
6101	F	Covr	Y	16	3	1	13%	0	0	0	0	0
6102	F	Covr	Y	10	0	0	0%	0	0	0	0	0
6103	F	Covr	Y	10	0	1	5%	0	0	0	0	0
6104	F	UnCovr	Y	16	0	0	0%	0	0	0	0	0
6105	F	UnCovr	Y	10	0	0	0%	0	0	0	0	0

6106	F	Covr	Y	10	2	0	10%	0	0	0	0	0
6107	F	UnCovr	Y	10	0	0	0%	0	0	0	0	0
6108	F	UnCovr	Y	20	2	2	10%	0	0	0	0	poor
6109	F	UnCovr	Y	8	0	0	0%	0	0	0	0	0
6110	F	Covr	Y	20	2	1	8%	0	y	0	0	0
6400	F	Covr	Y	66	2	1	2%	0	0	0	0	0
6123	F	UnCovr	Y	20	0	0	0%	0	0	0	0	0
6423	F	Covr	Y	12	1	0	4%	0	0	0	0	0
6424	F	Covr	Y	18	0	0	0%	0	y	0	0	poor
6398	F	Covr	Y	20	2	3	0%	0	y	0	0	0
6401	F	UnCovr	Y	10	5	0	0%	0	y	0	0	0
6422	F	Covr	Y	20	5	6	0%	0	y	0	0	0
6423	F	UnCovr	Y	20	2	0	0%	0	0	0	0	0
6424	F	UnCovr	Y	16	0	3	0%	0	0	0	0	0
6429	F	UnCovr	Y	16	0	1	0%	0	0	0	0	0

**Sector G**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
6112	G	Covr	Y	6	0	0	0%	0	0	0	0	0
6113	G	Covr	Y	20	0	1	3%	0	0	0	0	0
6114	G	UnCovr	Y	12	0	0	0%	0	0	0	0	0
6115	G	UnCovr	Y	6	0	0	0%	0	0	0	0	0
6116	G	UnCovr	Y	16	3	2	16%	0	0	0	0	0
6117	G	Covr	Y	26	0	0	0%	0	0	0	0	0
6118	G	Covr	Y	24	4	3	15%	0	0	0	0	0
6119	G	UnCovr	Y	20	0	0	0%	0	0	0	0	0
6120	G	UnCovr	Y	26	0	1	2%	0	0	y	0	poor
6121	G	Covr	Y	13	1	3	15%	0	0	0	0	0
6122	G	UnCovr	Y	10	0	0	0%	0	0	0	0	0
6134	G	Covr	Y	8	1	0	6%	0	0	0	0	0
6135	G	UnCovr	Y	10	0	1	5%	0	0	0	0	0
6276	G	Covr	N	7	0	0	0%	0	0	0	0	0
6277	G	UnCovr	Y	10	0	0	0%	0	0	0	0	0
6278	G	Covr	Y	8	4	5	56%	0	0	0	0	0
6301	G	UnCovr	Y	10	0	0	0%	0	0	0	0	poor
6280	G	Covr	Y	18	0	0	0%	0	0	0	0	poor
6295	G	UnCovr	N	60	5	2	6%	0	0	0	0	0
6296	G	UnCovr	Y	60	1	1	2%	0	y	0	0	0
6297	G	Covr	Y	10	3	3	30%	0	0	0	0	poor
6298	G	UnCovr	Y	18	1	1	6%	0	0	0	0	0
6299	G	UnCovr	Y	16	6	5	34%	0	0	0	0	0
6300	G	UnCovr	Y	28	17	17	61%	0	0	0	0	poor
6301	G	Covr	Y	16	10	8	56%	0	0	0	0	0
6302	G	UnCovr	Y	16	0	0	0%	0	0	0	0	0
6306	G	Covr	Y	30	1	2	5%	0	0	0	0	0
6307	G	UnCovr	Y	46	4	6	11%	0	0	0	0	0
6308	G	Covr	Y	100	50	51	51%	0	0	0	0	0
6309	G	UnCovr	Y	52	0	0	0%	0	0	0	0	0
6310	G	UnCovr	Y	59	5	5	8%	0	0	0	0	0
6311	G	Covr	Y	8	2	1	19%	0	0	0	0	poor
6313	G	Covr	Y	8	4	4	50%	0	0	0	0	poor
6314	G	UnCovr	Y	40	23	21	55%	0	0	0	0	0
6315	G	Covr	Y	35	27	29	80%	0	0	0	0	0
6316	G	UnCovr	Y	76	10	10	13%	0	0	0	0	0
6417	G	UnCovr	Y	8	0	0	0%	n	n	n	0	0
6419	G	Covr	Y	24	1	1	4%	n	n	n	0	0
6420	G	UnCovr	Y	12	0	0	0%	n	n	n	0	poor
6428	G	Covr	N	2	0	0	0%	n	n	n	0	0

**Sector H**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
6355	H	Covr	Y	6	4	0	33%	0	0	0	0	0
6356	H	UnCovr	Y	4	2	0	25%	0	0	0	0	0
6377	H	UnCovr	Y	10	0	0	0%	0	y	0	0	0
6378	H	UnCovr	Y	20	0	0	0%	0	y	0	0	0
6379	H	UnCovr	Y	10	0	0	0%	0	y	0	0	0
6383	H	Covr	Y	18	0	0	0%	0	0	0	0	0
6415	H	UnCovr	Y	20	0	0	0%	0	0	0	0	0

**Off Campus**

Location ID	Section	Covered / Uncovered	OSU Hoop	Rack Capacity	Utilization Count 10/26	Utilization Count 10/27	Average % Utilization	Abandoned Bikes	Damaged	Install Problem	bikes out of racks	paint condition
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5274	NA	UnCovr	N	8	0	0	0%	0	y	0	0	0
6303	NA	Covr	N	10	0	0	0%	0	0	0	0	0
6304	NA	UnCovr	Y	16	0	0	0%	0	0	0	0	0
6305	NA	Covr	N	14	4	4	29%	0	0	0	0	0

## Appendix E Traffic Operations Study

## MEMORANDUM

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Date: February 11, 2022 Project #: 24247.001

To: Sara Robertson, Oregon State University

From: Phill Worth; Molly McCormick; and Michael Ruiz-Leon

Project: **Traffic Operations Study Update: 2021-2022**

Subject: Summary of Existing Intersection Operating Conditions for Vehicles

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### EXECUTIVE SUMMARY

A technical assessment of vehicular operations has been completed at 28 street intersections surrounding the Oregon State University (OSU) campus. These 28 intersections are the focus of a monitoring program, required by the City of Corvallis's (City) Land Development Code. Intersections not meeting City or Oregon Department of Transportation (ODOT) performance standards are identified and consideration is given to the types of intersection modifications that may meet the standard and the trade-offs of taking various actions, including doing nothing. The memorandum includes a comparison of measured volumes and assessment results from prior years to help gauge the degree of change in travel demand and travel patterns in the area.

One study intersection, SW 26<sup>th</sup> Street at US20/OR34, is currently not meeting the applicable standards during the typical weekday p.m. peak hour, based on traffic volumes measured in October 2021 and the application of analysis procedures from the *Highway Capacity Manual, 6<sup>th</sup> Edition* (HCM 6<sup>th</sup> Edition, Reference 1). Geometric modifications were considered for the intersection to determine if there would be a net benefit for all travelers through the intersection. Although geometric modifications would reduce overall motor vehicle intersection delay, they increase exposure of pedestrians and bicyclists to motor vehicle conflicts. As a result, no geometric modifications are recommended at this time. Other alternatives and the associated trade-offs for dealing with the substandard performance have been developed for the intersection and are presented at the conclusion of this document. The intersection of SW 26<sup>th</sup> Street at US20/OR34 has not met standards during the weekday p.m. peak hour over the previous five reports. In addition, the City studied the intersection of SW 26<sup>th</sup> Street at US 20/OR 34 during its Transportation System Plan (TSP, Reference 2) update and also concluded that the studied intersection did not meet standards.

Results of the technical assessment and the options summarized in this document will inform discussions between OSU and the City regarding the appropriate actions moving forward. Outcomes of potential future OSU/City discussions could include the determination of mutually agreeable solutions and fair share proportionality of responsibility.

## INTRODUCTION

This memorandum summarizes a technical assessment of vehicular performance at 28 study intersections on and surrounding the Oregon State University campus in Corvallis, Oregon. Documentation of this assessment satisfies a City of Corvallis reporting requirement that was previously referred to as the Base Transportation Model (BTM) Update. As the assessment has changed over the years, the BTM approach has been replaced by annual on-the-ground data collection and analysis. Because of this, the name of this annual report was updated to the Traffic Operations Study (TOS) Update for the 2018-2019 report.

The analysis conducted for this TOS update utilizes the same analysis tools and procedures as those applied in the 2017-2018, 2016-2017, and 2015-2016 assessment reports; however, these are different from the tools and procedures required by the City in the 2014-2015 and 2013-2014 assessment reports. The City has transitioned from using the *2010 Highway Capacity Manual* (HCM 2010, Reference 3) to using the HCM 6<sup>th</sup> Edition. Updates to this national planning and analysis manual have resulted in modifications to the technical methods for determining intersection performance for vehicles. These new methods differ from those previously employed, and as such, special care should be taken when attempting to compare results across different periods and analysis methodologies. In addition, the assessment reports starting in 2015-2016 use a different software application, called Vistro; previous reports used Synchro 7. Like Synchro 7, Vistro utilizes the HCM analytical methods, but the new software application has the potential to impact the ability to compare the results of this assessment to previous annual reports. Additional details on the analysis tools and procedures applied are provided in the “2021-2022 Analysis Methodology” section.

This memorandum is organized as follows:

- **Study Intersections** – a map of the study area showing the location of study intersections and the functional classification of public streets and a set of diagrams illustrating the configuration and method of control at each intersection.
- **2021-2022 Analysis Methodology** – a description of the procedures used to analyze the collected data, the changes in analysis methods from previous assessments, and the likely implications of these changes on the reported results.
- **Traffic Volume Data** – a description of the traffic data collected for the report and a summary of the tube count data collected at 12 roadway locations on campus.
- **2021-2022 Analysis Results** – maps and diagrams that summarize the vehicular demands measured at the study intersections and on key roadway segments; tables and diagrams that summarize the vehicular operations analysis results at each intersection; and tables that allow for a side-by-side comparison of traffic volumes and vehicular operations results across multiple assessment reports.

- **Considerations for Intersections Not Meeting Standards** – a summary of potential approaches to address vehicular performance issues, supplemented with vehicular operations analysis of specific improvement options.

## UNIQUE CIRCUMSTANCES

### Temporary NW Orchard Avenue Traffic Flow Change

Between the 2018-2019 assessment and the 2021-2022 assessment, NW Orchard Avenue between NW 30<sup>th</sup> Street and NW 27<sup>th</sup> Street was temporarily modified to a one-way eastbound roadway to support construction projects in the area. Prior to the change, the facility was a bi-directional roadway. Special care should be taken for the intersection operations at the NW Orchard Avenue and NW 30<sup>th</sup> Street intersection when attempting to compare results before and after the traffic control change. The roadway is intended to revert back to bi-directional traffic flow when the construction projects are completed in 2024.

### Temporary Closure of NW 30<sup>th</sup> Street

During the October 2021 data collection, NW 30<sup>th</sup> Street south of NW Van Buren Avenue was observed to be closed off with construction barricades. As a result, special care should be taken for comparing operations of the NW 30<sup>th</sup> Street intersection at NW Orchard Avenue and at NW Harrison Boulevard.

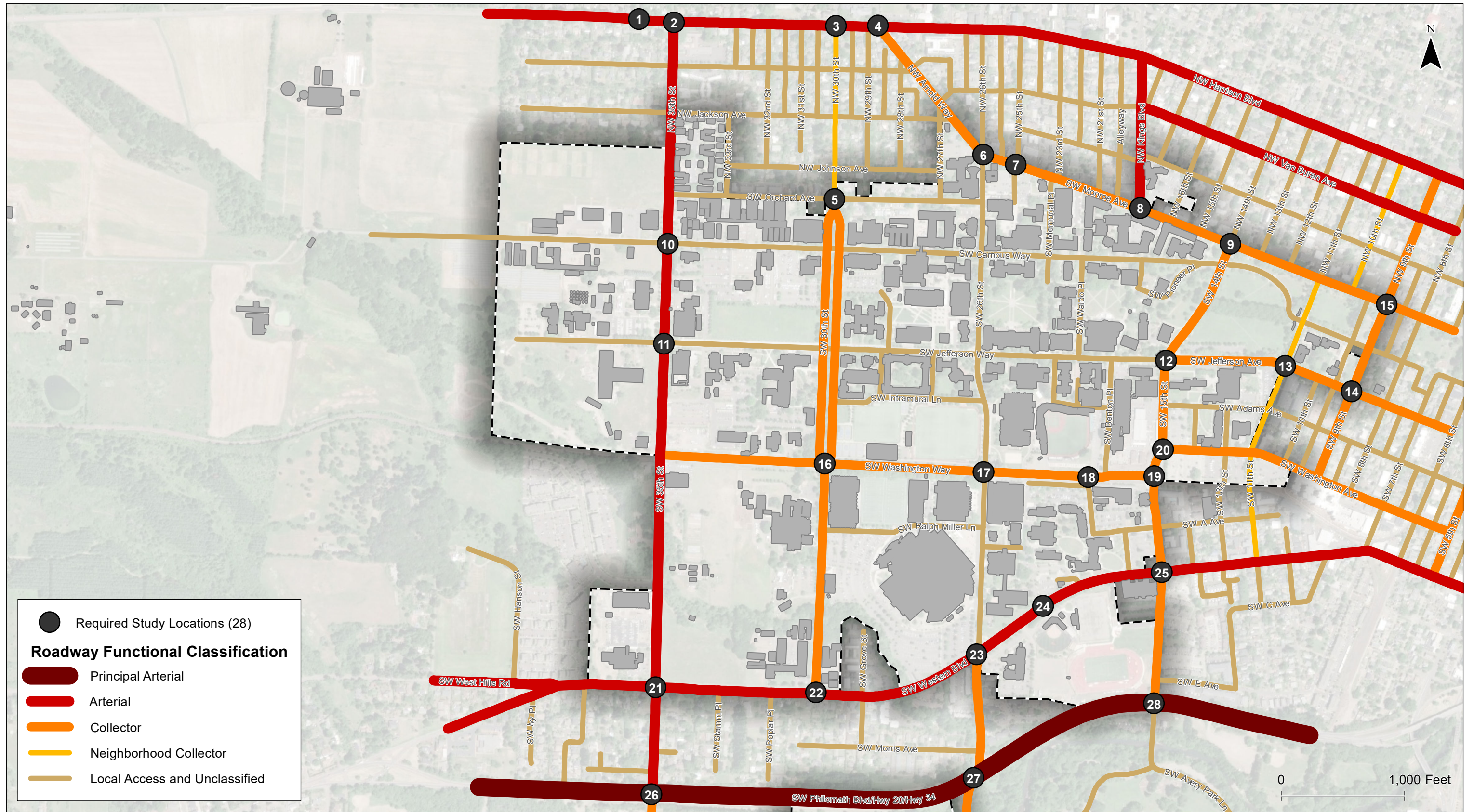
### Coordinated Signals on US 20/OR 34

During the 2018-2019 assessment, the Vistro analysis was updated to model the intersections of SW 35<sup>th</sup> Street at US 20/OR 34, SW 26<sup>th</sup> Street at US 20/OR 34, and SW 15<sup>th</sup> Street at US 20/OR 34 as coordinated signals. Coordinated signals are used to progress traffic on a mainline corridor through several intersections. The coordinated intersections often operate with the same cycle lengths or half-cycle lengths to maintain coordination between them, creating platoons of vehicles that progress through the corridor as a group instead of individual vehicles that arrive randomly to the signal. The intent of the approach is to offset the start of green time along the corridor in order for the platoon to have a green indication as it approaches each signalized intersection.

## STUDY INTERSECTIONS

A consistent set of 28 intersections were studied again this year. The intersections were selected by the City and OSU to identify changes in traffic flows and operations that might be associated with campus development, city and regional growth, and changes to community travel patterns. **Figure 1** maps the study intersections and functional classifications of streets within the study area. Existing lane configurations and traffic control devices at the study intersections are diagrammed in **Figures 2a** and **2b**.

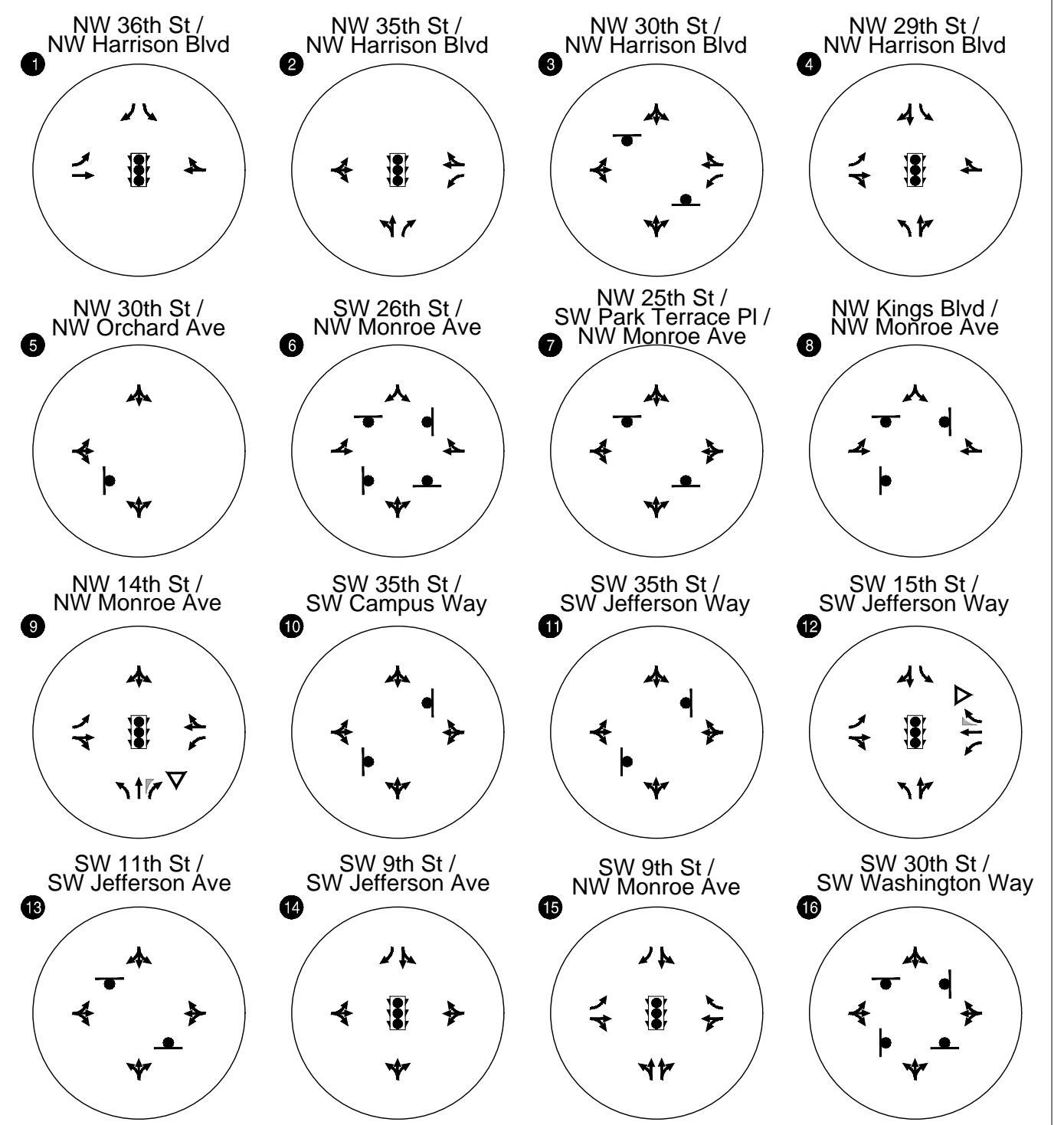




2021-2022 TOS Study Intersections  
Oregon State University, Corvallis, Oregon

Figure  
1

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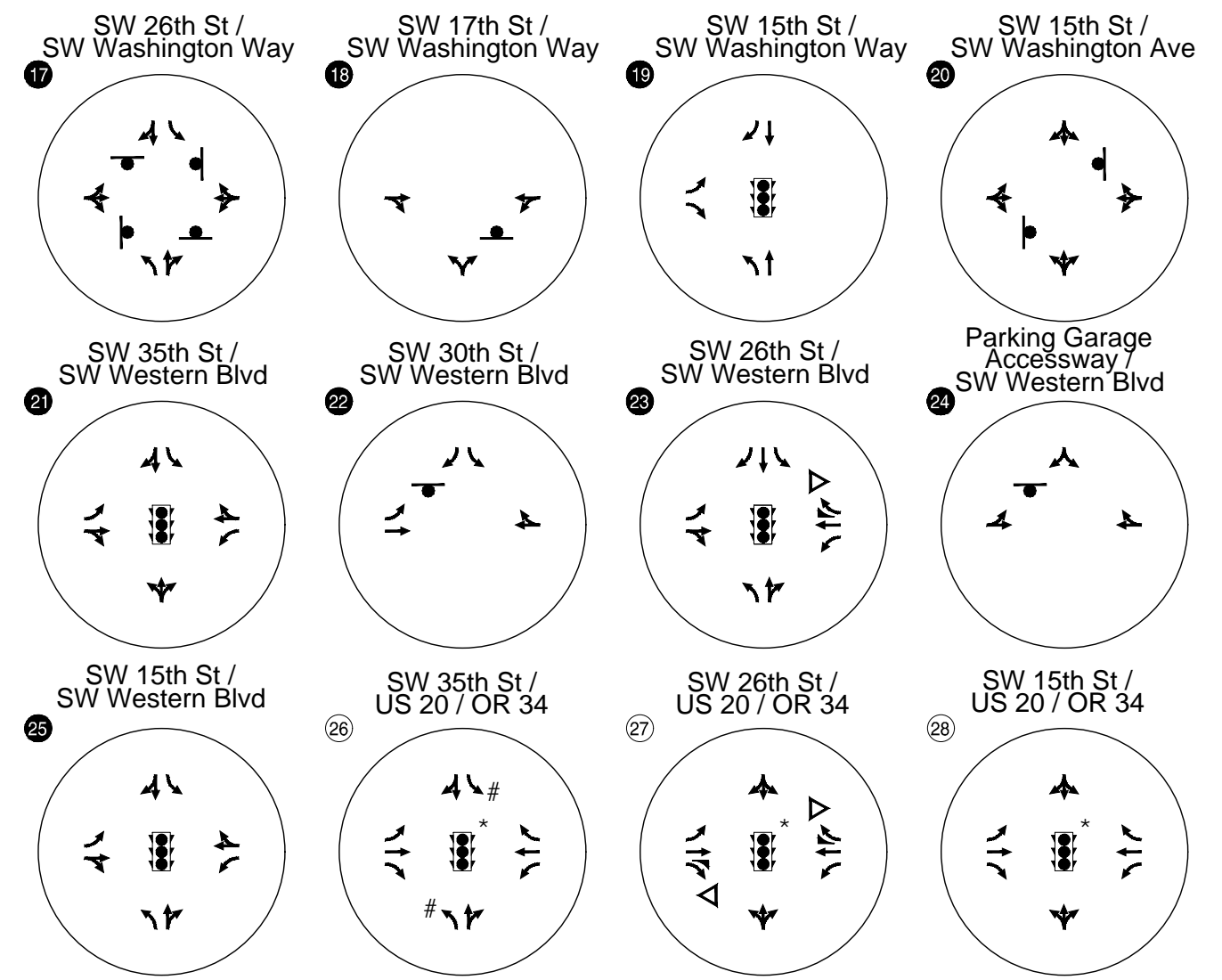


- Campus Boundary
- Study Intersection (City)
- Study Intersection (ODOT)
- Stop Sign
- Traffic Signal
- Yield Sign

Existing Lane Configurations and Traffic Control Devices  
Corvallis, Oregon

Figure  
2a

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- Campus Boundary
- Study Intersection (City)
- Study Intersection (ODOT)
- Stop Sign
- Traffic Signal
- Yield Sign
- \* Analyzed as a coordinated signal
- # Left-turn phasing updated in 2018 to permitted-protected

Existing Lane Configurations and Traffic Control Devices  
Corvallis, Oregon

Figure  
2b

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## 2021-2022 ANALYSIS METHODOLOGY

The City and ODOT have jurisdiction over the primary public streets in the study area. Both agencies use vehicular intersection performance to evaluate the effectiveness of the roadway network in meeting vehicular demands. Both agencies rely on the analytical methods for calculating intersection motor vehicle volume-to-capacity ratio (v/c) as defined in the HCM 6<sup>th</sup> Edition. Volume-to-capacity is a comparison of measured (or estimated) vehicular volumes in a given period of time against the estimated capacity of the intersection to accommodate vehicular demand.

The 2021-2022 analysis uses the HCM 6<sup>th</sup> Edition. The 2010 version of the HCM was used for the previous four analyses (2015-2016, 2016-2017, 2017-2018, and 2018-2019), while the 2000 version (HCM 2000, Reference 4) was used for the two analyses prior (2013-2014 and 2014-2015). The HCM 2010 included some updates for signalized and stop-controlled intersections<sup>1</sup>, so special consideration is needed when comparing the analysis results between years using various HCM versions. The HCM 6<sup>th</sup> Edition includes new chapters on travel time reliability, updated methods of managed lanes, work zones, alternative intersections, and combined methods for basic freeway and multilane highway segments.

At signalized and all-way-stop-controlled intersections (AWSC), volume-to-capacity ratio is measured and reported for the overall intersection. At two-way-stop-controlled intersections volume-to-capacity ratio is reported for the critical movement, which is defined as the movement with the highest v/c ratio. Typically, the critical movement is the left-turn from the stop-controlled approach. Critical approach v/c ratios are reported when there is a shared lane.

### Intersection Performance Standards

The City of Corvallis uses volume-to-capacity as the basis to measure congestion and facility performance. The City's mobility standard is a maximum volume-to-capacity (v/c) ratio of 0.85 at all City intersections. This standard applies to the overall intersection v/c ratio at signalized intersections and to all movements serving 20 vehicles per hour or more at unsignalized intersections. Critical approach v/c ratios are reported when there is a shared lane.

ODOT uses v/c ratio to assess intersection vehicle operations on state facilities. Table 6 of the *Oregon Highway Plan* (OHP, Reference 5) establishes maximum vehicle volume-to-capacity ratios for all signalized and un-signalized intersections on state facilities. The OHP ratios are used to support planning efforts to identify and address future system deficiencies. The ODOT-controlled intersections within the study area are located along the Newport-Corvallis Highway (US 20/OR 34), which is designated as an urban principal arterial and statewide freight route within a Metropolitan

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<sup>1</sup> Key differences include modeling fully-actuated dual ring control for signalized intersections and adding a queue-estimation procedure for all-way-stop-control intersections.

Planning Organization (Corvallis Area Metropolitan Planning Organization). Based on this designation, the OHP established intersection performance standard on this highway is a volume-to-capacity ratio of 0.85 or lower.

## Analysis Tool

This is the fifth assessment report where PTV Vistro has been used as the software analysis tool for the majority of the study intersections. Vistro applies the HCM 6<sup>th</sup> Edition intersection analysis methodologies required by the City and ODOT and specifically accounts for peak hour traffic patterns, pedestrian and bicycle activity<sup>2</sup> levels, signal timing, intersection geometry, and lane configurations. Vistro, however, is not yet able to account for the effect of upstream signals at two-way stop-controlled intersections, particularly where upstream signals create gaps for vehicles turning from the minor street(s).

Because Synchro handles analysis in these circumstances better than Vistro, Synchro and the HCM 2010 were used to assess operations at the intersection of the OSU Parking Garage Accessway and SW Western Boulevard, which is situated between the signalized intersections of SW 15<sup>th</sup> Street and SW 26<sup>th</sup> Street on SW Western Boulevard. Vistro is unable to account for the gaps in traffic created on SW Western Boulevard by these signals, which enable vehicles to more easily turn from Parking Garage Accessway onto SW Western Boulevard. Field observation of delay for turning vehicles and a comparison of operations from Vistro and Synchro confirmed that Synchro more appropriately reports operations at this intersection. This is the fifth assessment to use this analysis process.

The assessment reports for 2013-2014 and 2014-2015 used Synchro 7 to complete all operational analysis. BTM updates prior to the 2013-2014 report relied on the BTM Tool for forecasting and analysis of intersection operations. As such, caution should be used when attempting to compare 2021-2022 results with prior BTM Update reports that used different analysis tools. Additional information about the ability and appropriateness of comparisons is offered in the section titled "Cautions Regarding Comparisons to Previous Analyses."

## TRAFFIC VOLUME DATA

Analysis of intersection operations during typical weekday morning and evening peak conditions was completed based on volumes measured during fall term of the OSU 2021-2022 academic year.

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<sup>2</sup> It should be noted that the HCM does *not* account for bicycle and pedestrian activity at all-way-stop-controlled intersections or for bicycle activity at two-way stop-controlled intersections. Therefore, at intersections with heavy bicycle and/or pedestrian demand, the HCM operational results may not accurately report vehicular delay.

## Measured Volumes

Two types of traffic volume counts were completed to understand traffic flows on key streets in the area. Tube counts of directional auto traffic on roadway segments were collected at 12 locations on and near campus over a 72-hour period. Intersection turning movement counts were collected for all modes during morning and evening peak periods of demand at the 28 study intersections. Examination of the roadway segment (tube) count data reveals a profile of vehicular demand over the course of a day and the relationship of peak periods of demand (such as morning and evening commuter peaks) to demands throughout the day.

### *Tube Counts*

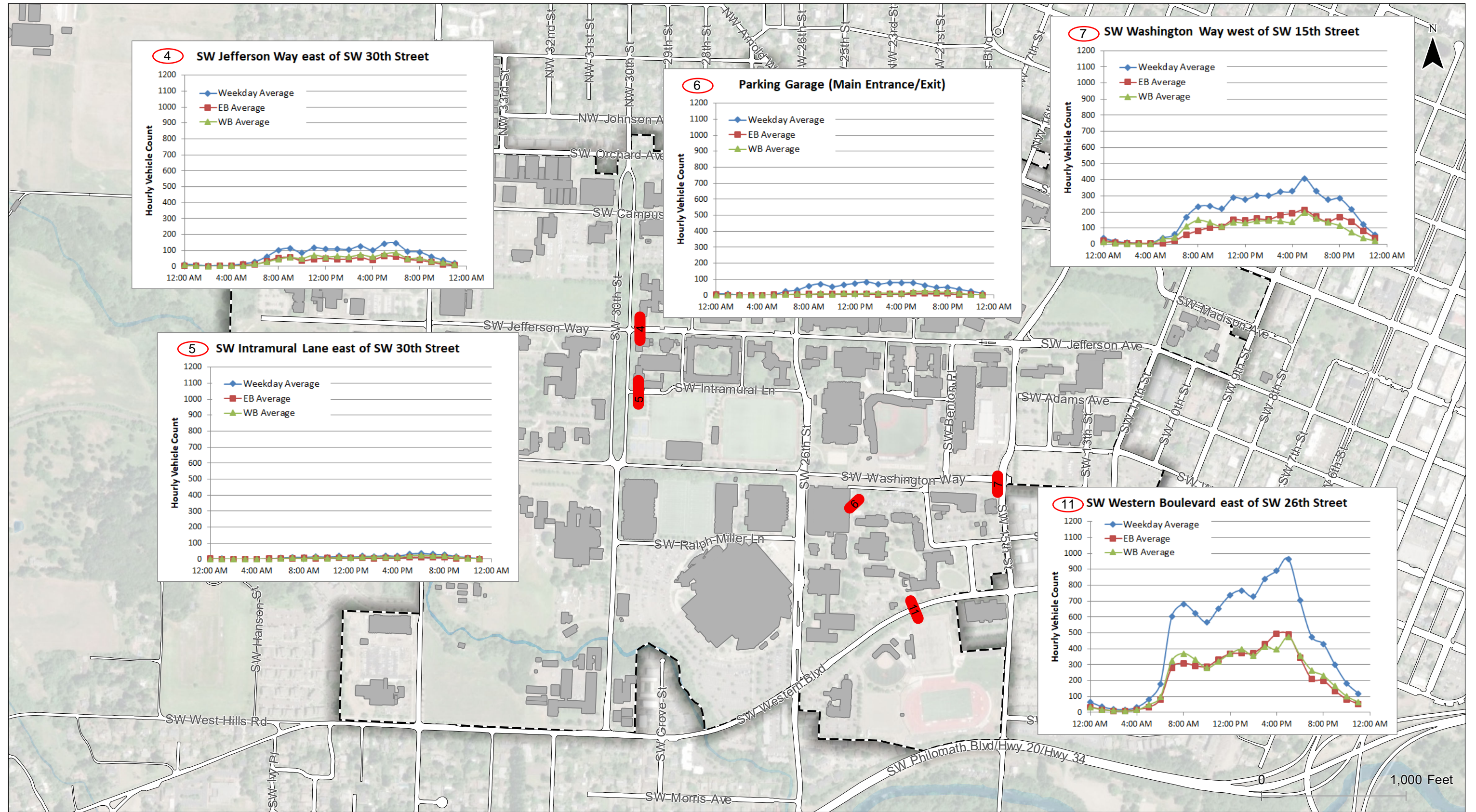
Roadway segment (tube) counts were collected at a total of 12 locations in October 2021, as shown in **Figure 3a** and **Figure 3b**. Tube counts were collected from October 19, 2021 through October 21, 2021. The data includes vehicle volume, classification (e.g., motorcycle, auto, light truck, bus, and heavy vehicle), direction of travel, and speed. Graphs contained within **Figure 3a** and **Figure 3b** show the average hourly directional (red and green lines) and bidirectional (blue lines) weekday traffic volume profile at each tube count location.

**Table 1** provides a summary of the average weekday total volume and peak hour volume at each tube count location between 2013 and 2021. Considering only the locations where data was collected all seven years, traffic volumes are highest on SW 14<sup>th</sup> Street, south of NW Monroe Avenue, and on SW 35<sup>th</sup> Street, north of SW Western Boulevard and north of NW Orchard Avenue.

Of all the locations counted in 2021, however, the tube count location on SW Western Boulevard, east of SW 26<sup>th</sup> Street experienced the highest traffic volumes. Most of the tube count locations experienced higher vehicular demand during the weekday evening commuter peak than during the weekday morning commuter peak. The data collected is provided in *Appendix A*.

**Table 1** provides a comparison of peak hour and average daily traffic (ADT) volumes across seven years of measured data. Cells shaded in grey feature the highest measured peak hour and daily volume at each location and the year it occurred. The total tube count volumes measured at the first eight locations listed in the table are summed at the bottom. A comparison of these totals across the years shows a general decrease overall and an ADT decrease of 12% from 2018 to 2021, most likely in response to COVID-19 impacts and continued work-from-home operations for many businesses throughout the state. During the October 2021 data collection, the OSU Fall Term was in session with in-person classes, but some university staff continued to work partially or completely from home.

The graph in **Exhibit 1** illustrates the cumulative northbound/southbound traffic volumes measured by the road tubes (excluding the Parking Garage Accessway) throughout the day in 2021 compared to the four most recent years of data. The 2021 time-of-day profile is very similar to data from the previous years and is not the highest measured volume during any given period of the day.

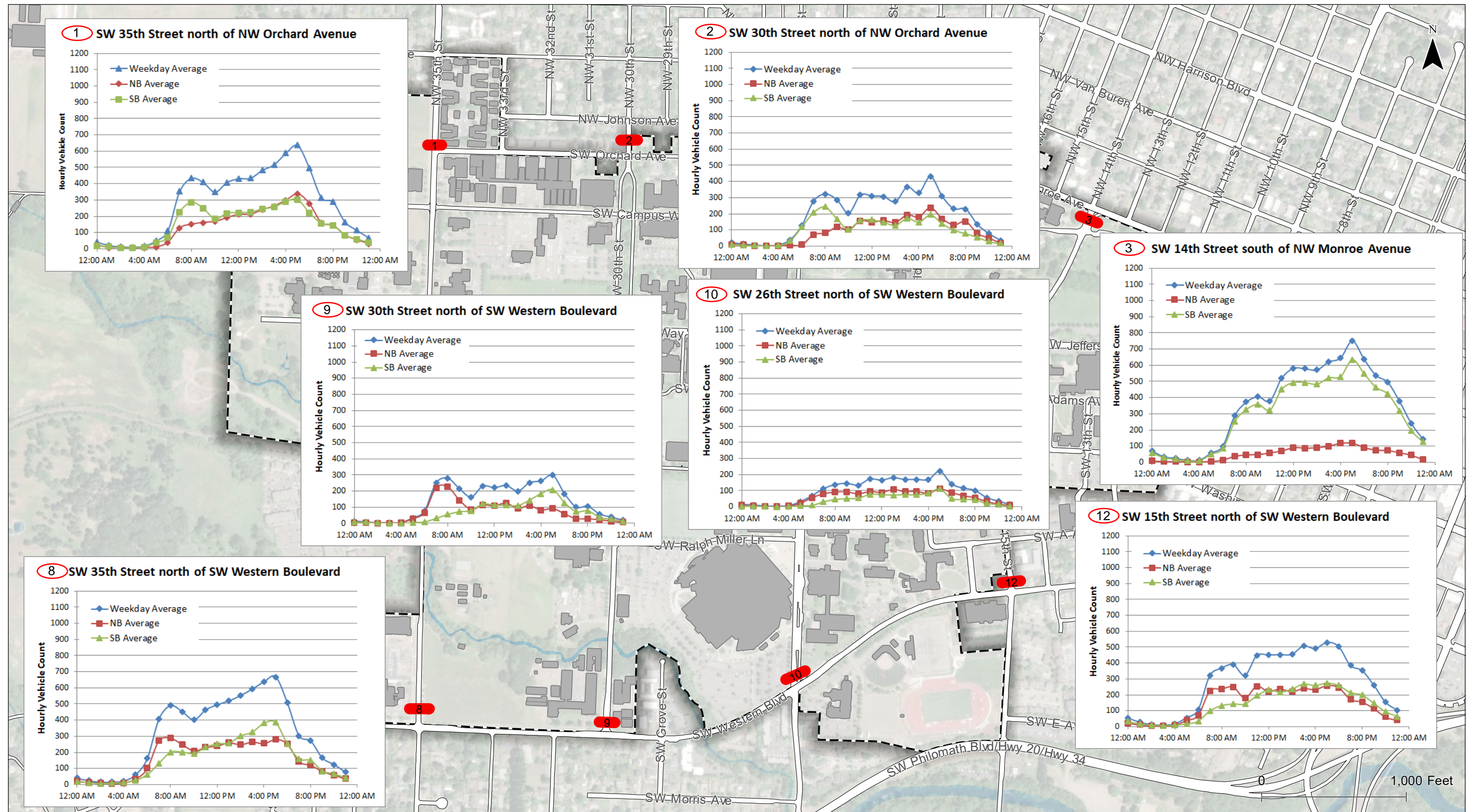


TOS Tube Count (12 total)

**Tube Count Locations and Hourly Volume Profiles - East/West Roadways  
Oregon State University, Corvallis, Oregon**

**Figure  
3a**

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TOS Tube Count (12 total)

Tube Count Locations and Hourly Volume Profiles - North/South Roadways Oregon State University, Corvallis, Oregon

Figure 3b

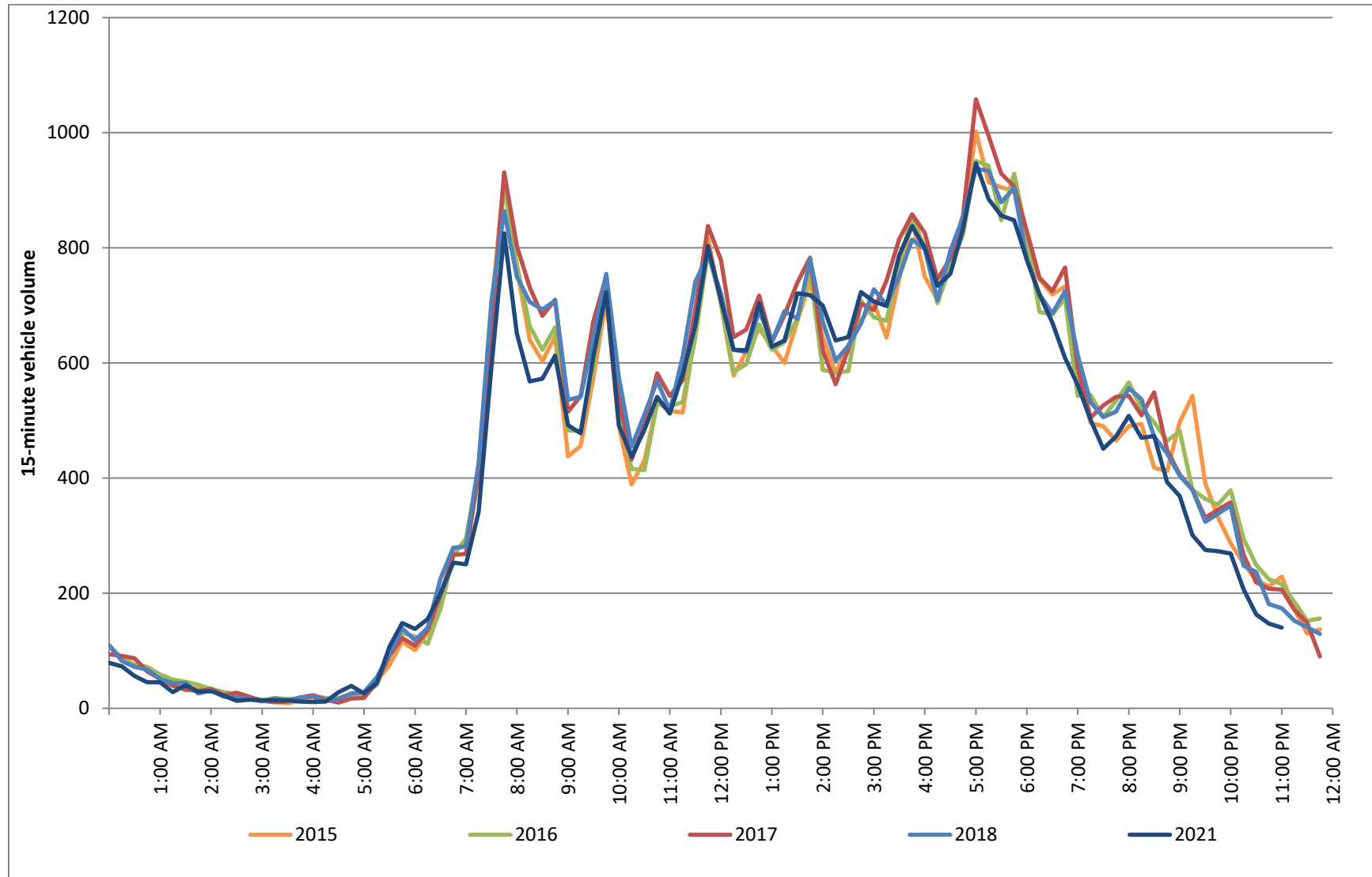


**Table 1: Average Weekday Roadway Volumes at Tube Count Locations**

Tube Count Location	2013			2014			2015			2016			2017			2018			2021		
	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour	Average Daily Traffic (ADT) <sup>1</sup>	Peak Hour Volume <sup>1</sup>	Start of Peak Hour
SW 35 <sup>th</sup> St, north of NW Orchard Ave	7,020	675	4:45 PM	6,655	660	4:45 PM	7,765	725	5:00 PM	7,610	715	5:00 PM	7,670	760	5:00 PM	7,960	740	4:30 PM	6,755	640	4:45 PM
SW 35 <sup>th</sup> St, north of SW Western Blvd	5,925	670	4:45 PM	7,035	695	7:30 AM	7,620	725	7:30 AM	7,640	690	5:00 PM	7,865	755	4:45 PM	8,025	735	4:45 PM	7,470	685	4:45 PM
SW 30 <sup>th</sup> St, north of NW Orchard Ave	5,400	535	6:00 PM	5,625	505	5:00 PM	6,075	555	5:00 PM	6,135	570	5:00 PM	5,875	545	5:00 PM	5,870	510	5:00 PM	4,665	430	5:00 PM
SW 30 <sup>th</sup> St, north of SW Western Blvd	3,670	395	7:30 AM	3,345	330	7:30 AM	3,915	380	7:30 AM	4,165	390	7:30 AM	3,875	365	7:30 AM	3,830	355	7:45 AM	3,250	310	4:45 PM
SW 26 <sup>th</sup> St, north of SW Western Blvd	2,680	270	5:00 PM	3,755	310	3:15 PM	2,950	260	6:00 PM	2,745	240	5:00 PM	3,705	330	5:00 PM	3,335	285	5:00 PM	2,360	220	5:00 PM
SW 14 <sup>th</sup> St, south of NW Monroe Ave	8,830	725	5:00 PM	7,525	620	5:45 PM	8,935	800	5:00 PM	9,110	765	5:15 PM	9,375	800	5:00 PM	8,800	760	5:00 PM	8,470	750	5:00 PM
SW 15 <sup>th</sup> St, north of SW Western Blvd	6,700	545	4:45 PM	5,415	485	4:45 PM	6,570	585	5:00 PM	6,990	585	5:00 PM	7,495	615	5:00 PM	7,265	570	5:00 PM	6,790	550	5:30 PM
SW Washington Way, west of SW 15 <sup>th</sup> St	4,645	410	5:00 PM	3,560	315	5:00 PM	5,345	505	6:00 PM	4,830	440	5:00 PM	5,000	455	5:00 PM	5,440	490	5:00 PM	4,560	410	5:15 PM
Parking Garage (Main entrance/exit)	2,210	225	9:15 AM	2,515	325	9:30 AM	1,680	165	6:00 PM	1,560	135	7:45 AM	2,330	270	3:00 PM	2,165	240	3:00 PM	1,000	80	1:15 PM
SW Washington Way, west of SW 26 <sup>th</sup> St	2,915	280	5:00 PM	2,605	215	5:00 PM	2,935	245	4:45 PM	2,990	285	5:15 PM	3,025	255	5:00 PM	2,960	260	5:00 PM	N/A	N/A	N/A
SW Jefferson Way, east of SW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	2,740	290	5:15 PM	2,105	185	1:30 PM	2,035	180	5:30 PM	2,295	185	3:15 PM	1,675	155	5:15 PM
SW 26 <sup>th</sup> St, south of SW Jefferson Way	N/A	N/A	N/A	N/A	N/A	N/A	2,255	190	3:00 PM	2,065	155	5:00 PM	2,285	170	4:45 PM	1,960	155	5:00 PM	N/A	N/A	N/A
SW Western Blvd, east of SW 26 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	11,470	1,120	5:00 PM	12,235	1,165	5:00 PM	12,190	1,140	4:45 PM	11,435	1,055	5:00 PM	10,675	965	5:00 PM
SW Intramural Ln, east of SW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	370	35	5:45 PM	265	25	6:30 PM	325	30	6:00 PM	320	35	5:30 PM
NW Jackson Ave, west of NW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	565	50	5:15 PM	N/A	N/A	N/A	730	65	4:45 PM	N/A	N/A	N/A
NW Jackson Ave, east of NW 30 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,430	140	5:15 PM	N/A	N/A	N/A	1,480	135	5:15 PM	N/A	N/A	N/A
SW 26 <sup>th</sup> St, north of SW Campus Way	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	630	50	7:30 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW Campus Way, east of SW 26 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	410	40	9:15 AM	N/A	N/A	N/A	N/A	N/A	N/A
SW Jefferson Way, east of SW Waldo Pl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	875	60	5:15 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW May Ave, west of SW 17 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	725	60	8:45 PM	N/A	N/A	N/A	N/A	N/A	N/A
SW A Ave, west of SW 15 <sup>th</sup> St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	510	50	1:15 PM	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Tube Count Volumes</b>	<b>44,870<sup>2</sup></b>	<b>4,225<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>42,915<sup>2</sup></b>	<b>3,920<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>49,175<sup>2</sup></b>	<b>4,535<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>49,225<sup>2</sup></b>	<b>4,395<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>50,860<sup>2</sup></b>	<b>4,625<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>50,525<sup>2</sup></b>	<b>4,445<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>	<b>44,320<sup>2</sup></b>	<b>3,995<sup>3</sup></b>	<b>5:00 PM<sup>3</sup></b>

Notes: Shading indicates which year had the highest daily and/or peak hour volume  
<sup>1</sup> Rounded to the nearest 5 vehicles  
<sup>2</sup> Excluding Parking Garage and any tube locations that have not been counted each of the seven years from 2013 to 2021  
<sup>3</sup> Reflective of System Peak Hour, Excluding Parking Garage and any tube count locations that have not been counted each of the seven years from 2013 to 2021

**Exhibit 1: System Volume Comparisons from 2015 to 2021 – North/South Routes**



## Intersection Counts

**Figures 4a, 4b, 5a, and 5b** provide a summary of the intersection turning movement counts (rounded to the nearest five vehicles per hour) that were collected at each of the 28 study intersections for the weekday a.m. and p.m. peak hours, respectively. Data was collected on October 19<sup>th</sup>, 20<sup>th</sup>, and 26<sup>th</sup> during the 2021 Fall Term. Pedestrian and bicycle demand data that was collected at each intersection during each peak period can be found in *Appendix B*. Graphs providing a comparison of pedestrian and vehicular volumes at intersections that are not meeting standards are provided later in this report. As previously noted, these pedestrian and bicycle demands were incorporated into the vehicular intersection analysis, where possible.

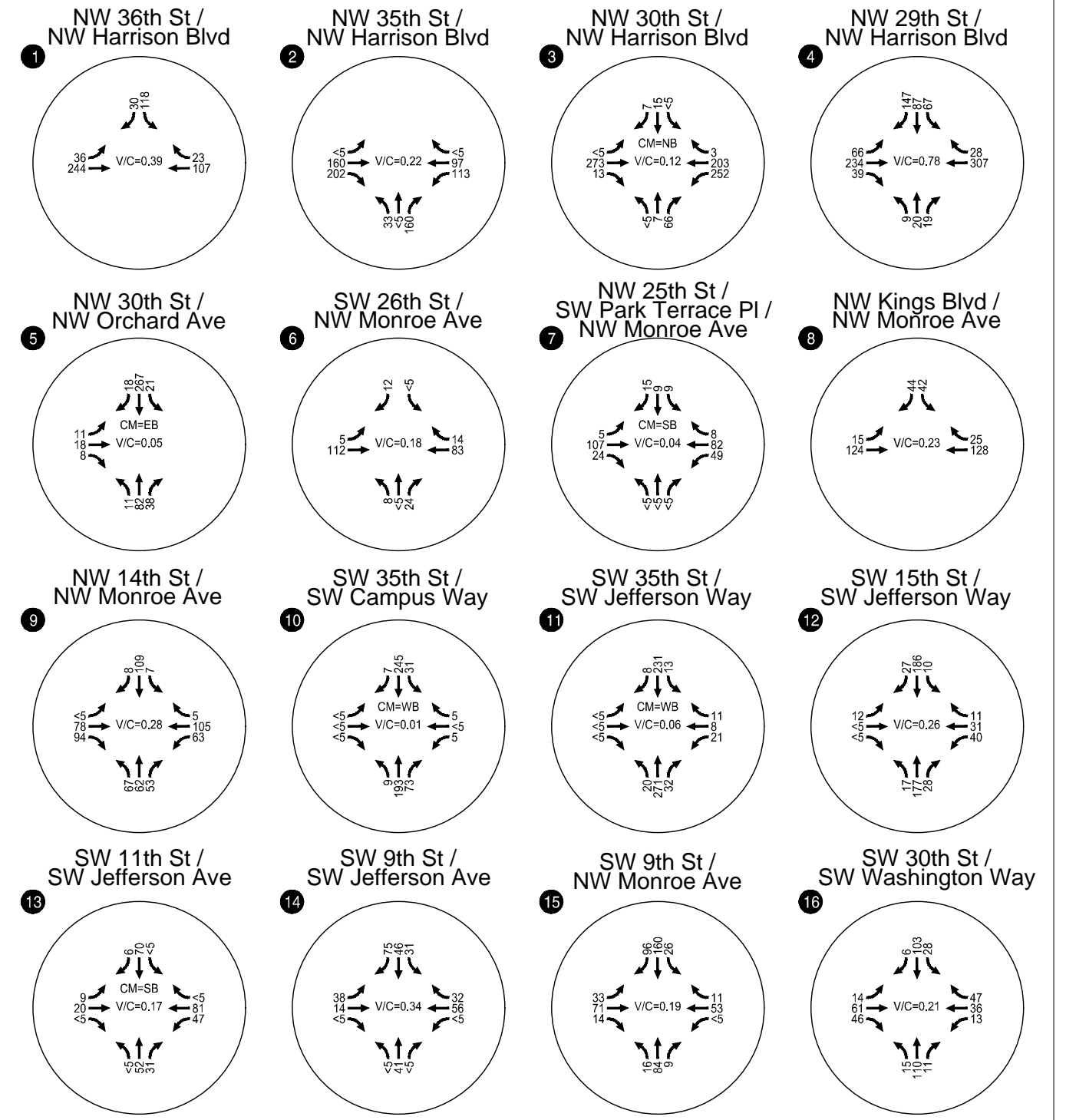
## 2021-2022 INTERSECTION ANALYSIS RESULTS

Vehicular volume-to-capacity (v/c) ratios were calculated for each of the study intersections, based on the volume of vehicles, pedestrians, and bicyclists measured on a typical weekday in mid-October 2021. An assessment of traffic volumes at key locations<sup>3</sup> identified the weekday a.m. peak hour as 7:35-8:35 a.m. and the weekday p.m. peak hour as 5:00-6:00 p.m. **Figures 4a, 4b, 5a, and 5b** provide a summary of the 2021-2022 operations analysis results for the weekday a.m. and p.m. peak hours, respectively. The collected turning movement counts are provided in *Appendix B*. The operational results worksheets are provided in *Appendix C*.

Only one study intersection does not meet performance standards. SW 26<sup>th</sup> Street at US 20/OR 34 had a v/c ratio of 0.88 for the weekday p.m. peak hour. The intersection of SW 26<sup>th</sup> Street at US 20/OR 34 also did not meet standards for the 2014-2015, 2015-2016, 2016-2017, 2017-2018, and 2018-2019 assessments, although a v/c ratio standard was not in use for those assessments. The City studied the intersection of SW 26<sup>th</sup> Street at US 20/OR 34 during its TSP update and also concluded that the studied intersection did not meet standards.

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<sup>3</sup> Key locations included the intersections that did not meet standards in the 2011-2012 OSU Base Transportation Model Update report (SW 15<sup>th</sup> Street at SW Washington Way, SW 30<sup>th</sup> Street at SW Western Boulevard, and NW 30<sup>th</sup> Street at NW Harrison Boulevard). Peak hours were corroborated with 72-hour vehicle roadway segment counts (tube counts).



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- Campus Boundary  
 - Study Intersection (City)  
 - Study Intersection (ODOT)

CM - Critical Movement or Approach if Shared Lane  
 V/C - Critical Volume-to-Capacity Ratio

Existing Intersection Operations - Weekday AM Peak Hour  
Corvallis, Oregon

Figure 4a



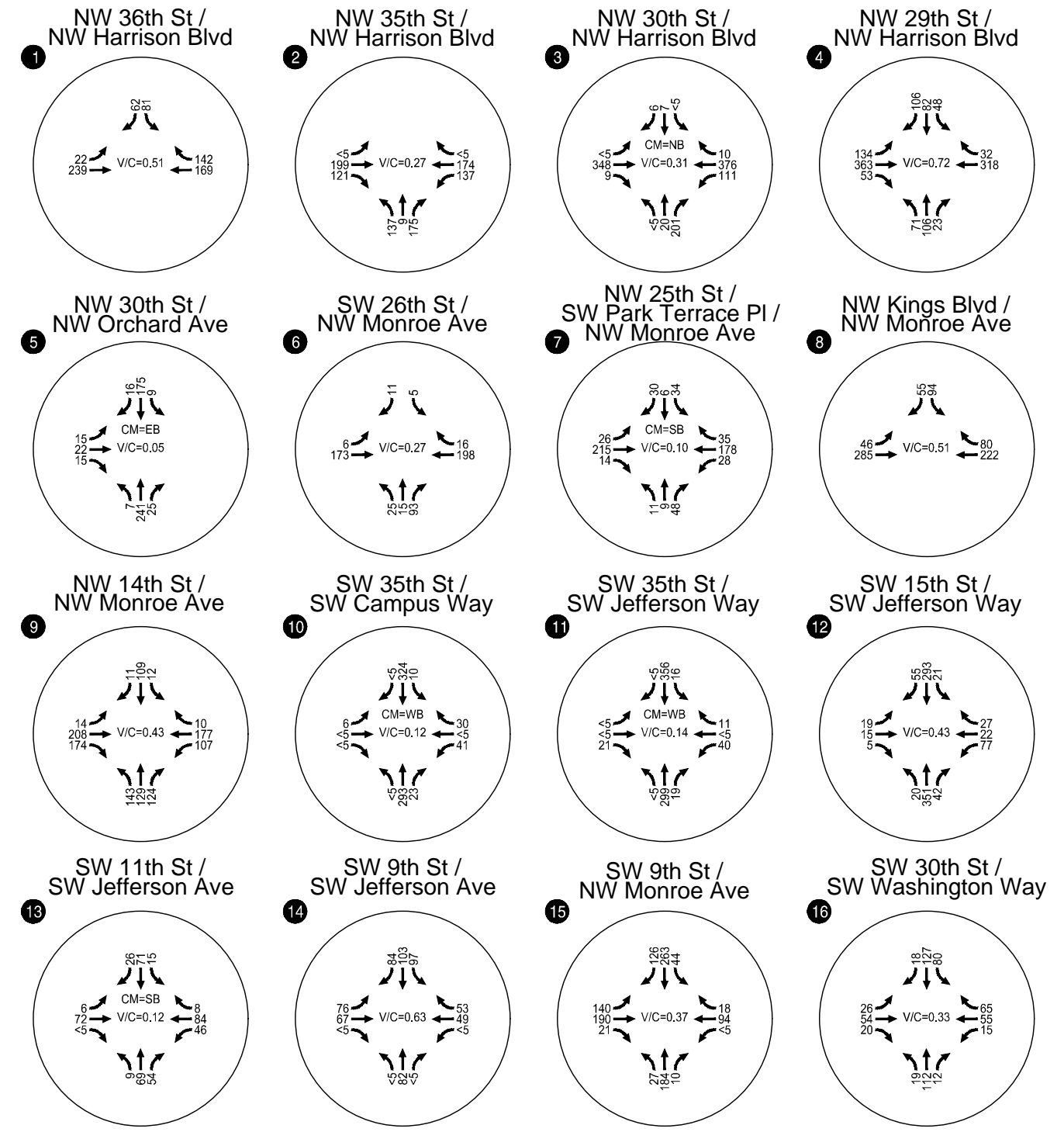
- Campus Boundary  
 - Study Intersection (City)  
 - Study Intersection (ODOT)

CM - Critical Movement or Approach if Shared Lane  
 V/C - Critical Volume-to-Capacity Ratio

Existing Intersection Operations - Weekday AM Peak Hour  
Corvallis, Oregon

Figure 4b

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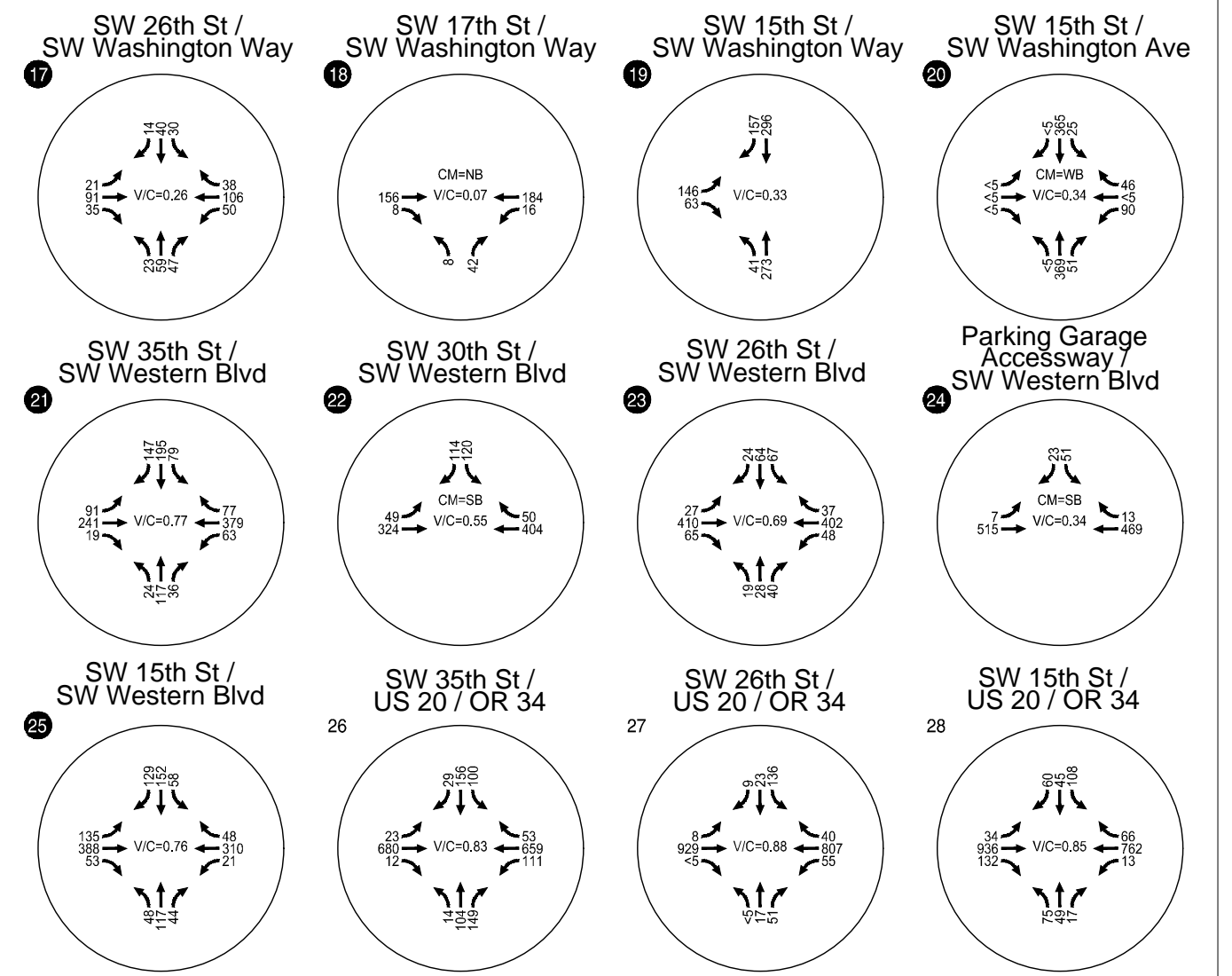
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- Campus Boundary  
 - Study Intersection (City)  
 - Study Intersection (ODOT)

CM - Critical Movement or Approach if Shared Lane  
 V/C - Critical Volume-to-Capacity Ratio

Existing Intersection Operations - Weekday PM Peak Hour  
Corvallis, Oregon

Figure 5a



- Campus Boundary
- Study Intersection (City)
- Study Intersection (ODOT)

CM - Critical Movement or Approach if Shared Lane  
 V/C - Critical Volume-to-Capacity Ratio

Existing Intersection Operations - Weekday PM Peak Hour  
 Corvallis, Oregon

Figure 5b

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**Table 2** presents a comparison of peak period volumes for the intersection not meeting standards. An annual compound growth rate is reported, from 2010 to 2021. The intersection of SW 26<sup>th</sup> Street at US 20/OR 34 experienced a negative growth rate in the a.m. peak hour and a positive growth rate in the p.m. peak hour.

While **Table 2** compares Total Entering Vehicles (TEVs) at intersections not meeting standards, **Table 3** describes the overall TEV for the study area, excluding intersections that are missing 2010 count data. The overall volume of traffic in the study area has decreased over the last eleven years, with a slight downward trend during both the a.m. and p.m. peak periods as compared to 2010 count data.

**Table 2: Volume Comparison for the Intersection Not Meeting Standards**

Intersection (years when standard was not met)	Peak Period	Total Entering Vehicles (TEV)								Annual Growth (2018- 2021)	Annual Compound Growth (2010- 2021)
		Fall 2010 Count	Fall 2013 Count	Fall 2014 Count	Fall 2015 Count	Fall 2016 Count	Fall 2017 Count	Fall 2018 Count	Fall 2021 Count		
27. SW 26 <sup>th</sup> St at US 20/OR 34 (2014, 2015, 2016, 2017, 2018, 2021)	AM	1,980	1,737	1,841	1,868	1,998	1,996	2,091	1,945	-2.38%	-0.16%
	PM	1,971	1,814	2,040	1,996	2,065	2,212	2,107	2,081	-0.41%	0.49%

Notes: <sup>1</sup> Annual compound growth calculated with 2013 count data instead of 2010.

**Table 3: Total Entering Volume for All Study Intersections**

Peak Period	2010	2013	2014	2015	2016	2017	2018	2021	Annual Compound Growth Rate (2018- 2021)	Annual Compound Growth Rate (2010- 2021)
AM	22,673	22,496	19,540	21,323	21,688	21,877	21,903	18,748	-5.05%	-1.71%
PM	28,801	28,033	25,738	27,208	27,674	28,461	27,313	25,417	-2.37%	-1.13%

Notes: TEV and growth rate calculations exclude intersections missing 2010 count data: Parking Garage Accessway at SW Western Blvd and SW 15<sup>th</sup> St at US 20/OR 34.

### Cautions Regarding Comparisons to Previous Analyses

Care has been taken to conduct this analysis by thorough application of the appropriate HCM methodology. In so doing, a more complete understanding of operational performance is established for each study intersection. However, the additional technical accuracy precludes certain comparisons from being made to prior assessment reports. Listed below are the main differences in the technical approach and their effects on the analysis results.

- **Pedestrian and bicycle activity.** Intersection analysis prepared for reports completed prior to the 2013-2014 report (e.g., 2010-2011 and 2011-2012) did not consider pedestrian and bicycle activity. Such activity is present at every study intersection and can have a measurable influence on the vehicular performance of the intersection. The inclusion of pedestrian and bike activity in the analysis will often result in a higher vehicular delay and sometimes a worse LOS than when they are omitted.



- **Measured versus estimated traffic volumes.** Analyses completed during and after the 2013-2014 assessment report use empirical counts rather than an estimate produced through the forecasting component of the BTM Tool. Year-over-year volume differences revealed by actual counts (in total, on one approach, and even to one movement at an intersection) can have a measurable effect on the vehicular performance of the intersection.
- **Intersection geometry.** The number of lanes on each approach to an intersection and how they are configured (e.g., through lanes, turn lanes, shared through and turn lanes) has an effect on the total capacity of the intersection. Thus, proper representation of each approach at each intersection is crucial to accurate results. Analyses completed during and after the 2013-2014 assessment report have verified all intersection configurations are accurately represented in the analysis. Review of prior BTM Update reports revealed errors that impacted the reported intersection performance results.
- **Default values and assumptions.** The analysis procedures provide default values, based on national research, which can be used when actual data is unavailable for key variables. Analyses completed during and after the 2013-2014 assessment report have used measured data to replace the majority of possible default values that may have been used in previous analysis. Examples of the variables include the percent of heavy vehicles in the traffic stream and the specific phasing and timing of traffic signals and their platooning effect on traffic streams at down-stream intersections. Unlike the influence of including pedestrian and bicycle volumes in the analysis, it is far more difficult to estimate the effect of replacing the default values with actual data. This is largely due to multiple variables dynamically interacting within the analysis process.

Prior to the 2015-2016 assessment report, the HCM 2000 methodology was used, in accordance with City and ODOT requirements. Beginning with the 2015-2016 assessment, requirements changed to incorporate the HCM 2010 methodology. Therefore, comparisons between previous reports should be made with acknowledgment of the following methodological differences between the HCM<sup>4</sup> 2000 and 2010:

- **Major modifications to signalized intersection methodology**
  - Designed to model modern, fully-actuated dual ring control
  - Estimates actuated phase duration
  - Improved control delay algorithms
  - Improved queue estimates
  - Added check procedure for left-turn lane overflow
- **Minor modifications to two-way stop-controlled intersection methodology**
  - Added ability to analyze intersections along six-lane streets
- **Minor modifications to all-way stop-controlled intersection methodology**
  - Added queue-estimation procedure

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<sup>4</sup> Most of the material listed is adapted from the Transportation Research Board, *2010 Highway Capacity Manual*, (2010) and TRB's online references.

Beginning with the 2021-2022 assessments, requirements changed to incorporate the HCM 6<sup>th</sup> Edition methodology. Comparisons between this report and previous reports should be made with acknowledgement of the following methodological differences between the HCM 2010 and HCM 6<sup>th</sup> Edition:

- **Minor modifications to signalized intersection methodology**
  - Saturation flow rate adjustment factors for heavy vehicles and grade are now combined
  - Delay of unsignalized movements at signalized intersection can now be considered when calculating intersection delay
  - New work zone presence, midsegment lane blockage, and downstream spillback adjustment factors for saturation flow rate
- **No significant modifications to two-way and all-way stop intersection methodologies**

## CONSIDERATIONS FOR INTERSECTIONS NOT MEETING STANDARDS

As noted in Table 2, one intersection does not meet standards under 2021 existing conditions. This section provides detail on the operational characteristics of the intersection. It identifies potential actions and the associated pros and cons of each action. For reference, graphs of the vehicular and pedestrian volumes are provided.

In the City's TSP, technical analysis of intersection operations was completed at 49 intersections of concern to the City under existing (2016-2017) conditions and in the future planning year of 2040. Of the 28 study intersections in the 2021-2022 TOS Update, 10 were intersections of concern that were studied in the City of Corvallis TSP. Where possible, references are made to the City's technical work<sup>5</sup>, findings and recommendations (gleaned from technical memoranda published by the City) regarding the intersection not meeting standards.

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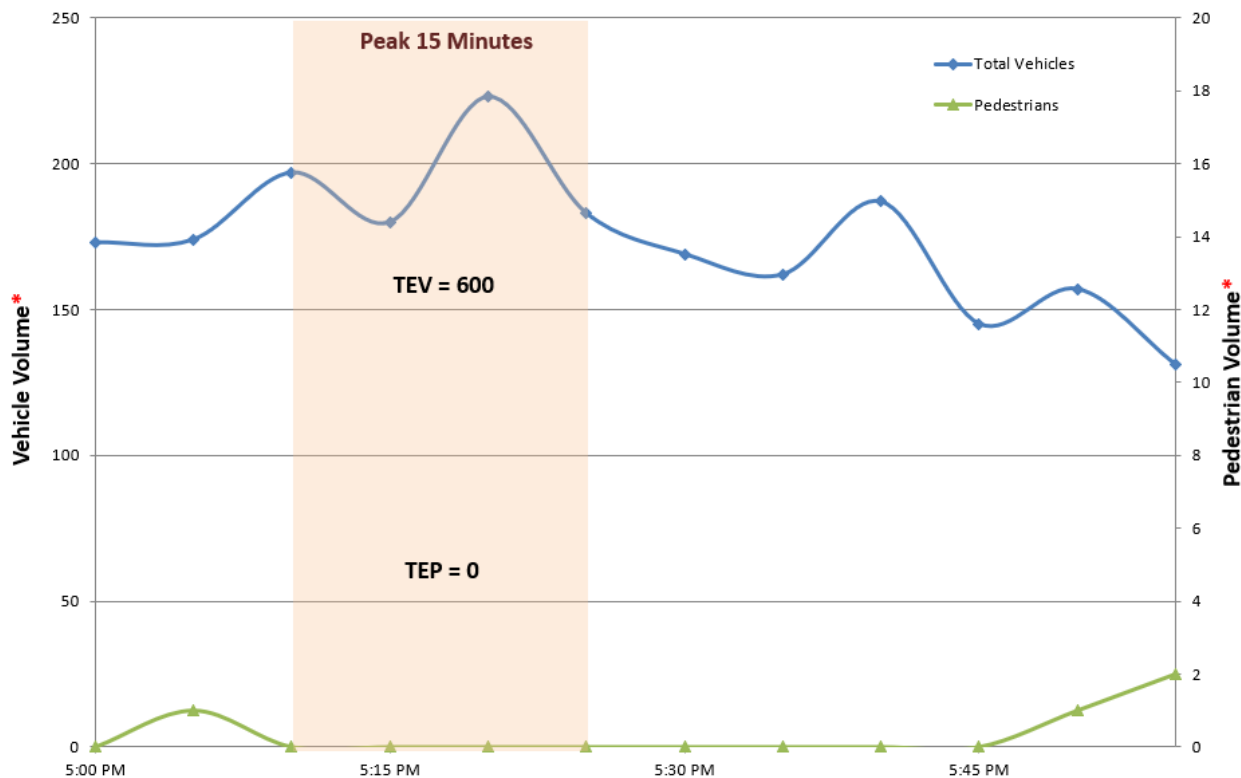
<sup>5</sup> City of Corvallis, Transportation System Plan Volume 2, Technical Memorandum No. 7 summarizes Existing Transportation Conditions, Technical Memorandum No. 17 summarizes Transportation System Solutions, and the Adopted Corvallis Transportation System Plan includes identified projects.

### Intersection 27: SW 26<sup>th</sup> Street at US 20/OR 34

**Operations detail:** This signalized intersection has exclusive left-, through-, and right-turn lanes in the eastbound and westbound directions, where the heaviest through volumes are found. In the northbound and southbound directions, it has shared left-turn/through/right-turn lanes. The analysis was updated this year to model the intersection as a coordinated signal. Highway corridor volumes are similar between SW 15<sup>th</sup> Street and SW 35<sup>th</sup> Street, during morning and afternoon peak hours.

The eastbound and westbound through lanes show the highest volume-to-capacity ratios at this intersection, indicating that additional capacity to address volumes in these lanes would allow the intersection to operate at a lower v/c ratio. **Exhibit 2** shows 2021 vehicular and pedestrian volume profiles for the p.m. peak hour. Overall, during the weekday p.m. peak hour the intersection operates at a v/c ratio of 0.88, which is in excess of the ODOT standard of 0.85. While turning volumes are relatively low on the eastbound and westbound approaches, through volumes are relatively high (929 in the eastbound direction and 807 in the westbound direction during the p.m. peak hour).

**Exhibit 2: SW 26<sup>th</sup> Street at US 20/OR 34 2021 p.m. Peak Hour Volume Profile**



**\*Note: Vehicle volume and pedestrian volumes are shown at different scales PHF = 0.87**

Based on counts collected in 2021, 2017, and 2018, eastbound through volumes during the p.m. peak hour have remained similar on US 20/OR 34 at this intersection, while westbound through volumes

decreased by about seven percent. The operations in 2021 are compared to those from 2013, 2014, 2015, 2016, 2017, and 2018 in **Table 4**.

**Table 4: SW 26<sup>th</sup> Street at US 20/OR 34 2013 to 2021 Comparison**

Analysis Scenario	Peak Period(s) Not Meeting Standards	Intersection v/c Ratio (a.m./p.m.)	Total Entering Vehicles
2013-2014 Assessment	Met standards	0.82/0.78	1,737/1,814
2014-2015 Assessment	PM	0.67/0.95	1,841/2,040
2015-2016 Assessment	AM/PM	0.86/0.88	1,868/1,996
2016-2017 Assessment	AM/PM	0.86/0.87	1,998/2,082
2017-2018 Assessment	AM/PM	0.88/0.93	1,996/2,212
2018-2019 Assessment <sup>1</sup>	PM	0.79/0.91	2,091/2,107
2021-2022 Assessment <sup>1, 2</sup>	PM	0.76/0.88	1,945/2,081

<sup>1</sup> The 2018-2019 and 2021-2022 assessments analyzed this intersection as a coordinated signal.

<sup>2</sup> Standards changed to a v/c ratio of 0.85 between the 2018-2019 and 2021-2022 assessments.

City TSP analysis of this intersection under existing p.m. peak conditions (summer 2016) determined the intersection was meeting operational standards. No safety issues were identified by the City's TSP analysis of crashes at this intersection. The City proposed the following list of improvements (from 2019 TSP):

- (TSP Project M2) – Intersection Improvements (capacity): Options may include;
  - 1) Constructing [a southbound right-turn lane or southbound]<sup>6</sup> left-turn lane,
  - 2) Constructing bike lanes on SW 26<sup>th</sup> Street, and
  - 3) Adding bicycle detection at the multi-use path approaches to the intersection.

Note: Retaining wall along Oak Creek would be required. Project is subject to ODOT approval. Project has potential impacts to or may be constrained by environmental resources. This is considered a medium-priority ODOT project with an estimated cost of \$1.3 million.

**Table 5** provides a number of potential actions that could be taken at the intersection and includes an evaluation of associated trade-offs. Some of these options align with those being considered by the City through its TSP.

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<sup>6</sup> Note: Conversation with City Public Works Project Manager Adam Steele on November 30<sup>th</sup>, 2018 confirmed the approach recommended for intersection improvements.

**Table 5: Potential Actions for the Intersection of SW 26<sup>th</sup> Street at US 20/OR 34**

Potential Action	Pros	Cons
<p><b>Do nothing.</b></p> <p>The v/c ratio is primarily used for planning purposes to identify long-term improvement needs. Delay at this intersection remains at acceptable levels, even during peak periods.</p>	<ul style="list-style-type: none"> <li>▪ No cost or right-of-way impacts.</li> <li>▪ No change that would affect mobility, connectivity or exposure for vehicles, pedestrians, and bikes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ For approximately 30 minutes of a typical day the intersection would not meet standards.</li> </ul>
<p><b>Encourage monitoring and signal timing modifications.</b></p> <p>Share traffic count data with ODOT and encourage consideration of signal timing evaluation and adjustment.</p>	<ul style="list-style-type: none"> <li>▪ Minimal cost, primarily in staff time.</li> <li>▪ Possible change that would reduce delay to highway through traffic but may increase delay to side street traffic.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Would not result in v/c being brought to standard.</li> <li>▪ Would require effort by ODOT to evaluate and implement effective adjustments.</li> <li>▪ May increase delay to side street traffic.</li> </ul>
<p><b>Pursue a variance.</b></p> <p>Engage in discussions with ODOT about the potential flexibility of the 0.85 v/c standard.</p>	<p>Depending on the policy change:</p> <ul style="list-style-type: none"> <li>▪ No physical changes may be needed, and no costs incurred.</li> <li>▪ No change would occur that affects mobility, connectivity or exposure for vehicles, pedestrians, and bikes.</li> <li>▪ Would allow the City/ODOT to consider multimodal operations and broader goals, in addition to vehicle mobility.</li> <li>▪ Modified v/c standard would alleviate the unintended consequence of prematurely designating a need that cannot be cost-effectively addressed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Would require efforts by ODOT to determine and implement the appropriate policy change.</li> </ul>
<p><b>Explore the practicality of installing an exclusive southbound left-turn lane and modify signal timing at this location.</b></p> <p>See City TSP Project M2.</p>	<ul style="list-style-type: none"> <li>▪ Would improve intersection operations.</li> <li>▪ Separates southbound left-turning vehicles from through and right-turning vehicles, allowing more right-turns on red, less delay for northbound vehicles, and more signal timing for eastbound/westbound movements.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potentially requires acquiring ROW and reconstructing north and south legs of the intersection.</li> <li>▪ Would increase crossing distance and exposure for pedestrians on the north leg of the intersection.</li> <li>▪ Depending on design details, may increase the level of traffic stress (LTS) for bicycles.</li> </ul>

## NEXT STEPS

Analysis conducted to date has found that one intersection does not meet operational standards during the weekday p.m. peak period only, compared to a range of four to eight intersections in the previous six annual studies, respectively. The failing intersection of SW 26<sup>th</sup> Street at US 20/OR34 may warrant further monitoring to determine if its operations are contributing to critical crash rates or other system degradation.

It will be important for OSU to coordinate with the City and ODOT to ensure that appropriate solutions are found and that partners contribute proportionally to their impacts.

## REFERENCES

1. Transportation Research Board. *Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, Sixth Edition*. 2016.
2. City of Corvallis Oregon. *City of Corvallis Transportation System Plan*. 2019.
3. Transportation Research Board. *2010 Highway Capacity Manual*. 2010.
4. Transportation Research Board. *2000 Highway Capacity Manual*. 2000.
5. Oregon Department of Transportation (ODOT). *Oregon Highway Plan*. 2015.

## Appendix A Tube Count Data



Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn NW Jackson Ave & NW Orchard Ave							QC JOB #: 15543961			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21		Hourly Traffic			Hourly Traffic	
12:00 AM		21	19	33		24			24	
01:00 AM		12	5	12		10			10	
02:00 AM		5	9	9		8			8	
03:00 AM		3	3	5		4			4	
04:00 AM		6	7	8		7			7	
05:00 AM		12	11	10		11			11	
06:00 AM		40	39	39		39			39	
07:00 AM		112	138	135		128			128	
08:00 AM		145	161	144		150			150	
09:00 AM		152	156	175		161			161	
10:00 AM		139	192	172		168			168	
11:00 AM		165	199	205		190			190	
12:00 PM		176	221	237		211			211	
01:00 PM		169	204	261		211			211	
02:00 PM		192	279	249		240			240	
03:00 PM		242	252	292		262			262	
04:00 PM		275	304	315		298			298	
05:00 PM		313	357	339		336			336	
06:00 PM		277	256	292		275			275	
07:00 PM		151	139	186		159			159	
08:00 PM		131	152	149		144			144	
09:00 PM		75	97	77		83			83	
10:00 PM		51	59	55		55			55	
11:00 PM		29	32	33		31			31	
<b>Day Total</b>		2893	3291	3432		3205			3205	
% Weekday Average		90.3%	102.7%	107.1%						
% Week Average		90.3%	102.7%	107.1%		100%				
AM Peak Volume		11:00 AM 165	11:00 AM 199	11:00 AM 205		11:00 AM 190			11:00 AM 190	
PM Peak Volume		5:00 PM 313	5:00 PM 357	5:00 PM 339		5:00 PM 336			5:00 PM 336	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn NW Jackson Ave & NW Orchard Ave							QC JOB #: 15543961			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
	19 Oct 21	20 Oct 21	21 Oct 21			Hourly Traffic			Hourly Traffic	
12:00 AM		20	12	20		17			17	
01:00 AM		12	11	12		12			12	
02:00 AM		4	5	6		5			5	
03:00 AM		9	4	8		7			7	
04:00 AM		10	11	10		10			10	
05:00 AM		31	45	38		38			38	
06:00 AM		74	69	68		70			70	
07:00 AM		204	246	225		225			225	
08:00 AM		279	293	281		284			284	
09:00 AM		241	250	252		248			248	
10:00 AM		179	183	183		182			182	
11:00 AM		177	214	263		218			218	
12:00 PM		155	273	234		221			221	
01:00 PM		131	276	264		224			224	
02:00 PM		196	280	255		244			244	
03:00 PM		231	264	274		256			256	
04:00 PM		317	248	304		290			290	
05:00 PM		310	246	343		300			300	
06:00 PM		232	190	236		219			219	
07:00 PM		161	160	147		156			156	
08:00 PM		124	151	157		144			144	
09:00 PM		67	100	79		82			82	
10:00 PM		55	67	59		60			60	
11:00 PM		33	39	38		37			37	
Day Total		3252	3637	3756		3549			3549	
% Weekday Average		91.6%	102.5%	105.8%						
% Week Average		91.6%	102.5%	105.8%		100%				
AM Peak Volume		8:00 AM 279	8:00 AM 293	8:00 AM 281		8:00 AM 284			8:00 AM 284	
PM Peak Volume		4:00 PM 317	2:00 PM 280	5:00 PM 343		5:00 PM 300			5:00 PM 300	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn NW Jackson Ave & NW Orchard Ave							QC JOB #: 15543961			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		41	31	53		42			42	
01:00 AM		24	16	24		21			21	
02:00 AM		9	14	15		13			13	
03:00 AM		12	7	13		11			11	
04:00 AM		16	18	18		17			17	
05:00 AM		43	56	48		49			49	
06:00 AM		114	108	107		110			110	
07:00 AM		316	384	360		353			353	
08:00 AM		424	454	425		434			434	
09:00 AM		393	406	427		409			409	
10:00 AM		318	375	355		349			349	
11:00 AM		342	413	468		408			408	
12:00 PM		331	494	471		432			432	
01:00 PM		300	480	525		435			435	
02:00 PM		388	559	504		484			484	
03:00 PM		473	516	566		518			518	
04:00 PM		592	552	619		588			588	
05:00 PM		623	603	682		636			636	
06:00 PM		509	446	528		494			494	
07:00 PM		312	299	333		315			315	
08:00 PM		255	303	306		288			288	
09:00 PM		142	197	156		165			165	
10:00 PM		106	126	114		115			115	
11:00 PM		62	71	71		68			68	
Day Total		6145	6928	7188		6754			6754	
% Weekday Average		91%	102.6%	106.4%						
% Week Average		91%	102.6%	106.4%		100%				
AM Peak Volume		8:00 AM 424	8:00 AM 454	11:00 AM 468		8:00 AM 434			8:00 AM 434	
PM Peak Volume		5:00 PM 623	5:00 PM 603	5:00 PM 682		5:00 PM 636			5:00 PM 636	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: NW 30th St btwn NW Johnson Ave & NW Orchard Ave							QC JOB #: 15543962			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		10	8	8		9			9	
01:00 AM		9	6	8		8			8	
02:00 AM		3	1	1		2			2	
03:00 AM		0	3	1		1			1	
04:00 AM		0	3	6		3			3	
05:00 AM		7	6	5		6			6	
06:00 AM		11	8	6		8			8	
07:00 AM		73	84	57		71			71	
08:00 AM		88	89	65		81			81	
09:00 AM		129	108	115		117			117	
10:00 AM		114	103	90		102			102	
11:00 AM		174	151	145		157			157	
12:00 PM		163	138	145		149			149	
01:00 PM		161	153	160		158			158	
02:00 PM		155	152	132		146			146	
03:00 PM		200	194	186		193			193	
04:00 PM		160	180	201		180			180	
05:00 PM		260	226	227		238			238	
06:00 PM		159	186	162		169			169	
07:00 PM		132	123	137		131			131	
08:00 PM		120	198	139		152			152	
09:00 PM		68	65	103		79			79	
10:00 PM		57	45	45		49			49	
11:00 PM		15	19	20		18			18	
<b>Day Total</b>		2268	2249	2164		2227			2227	
% Weekday Average		101.8%	101%	97.2%						
% Week Average		101.8%	101%	97.2%		100%				
AM Peak Volume		11:00 AM 174	11:00 AM 151	11:00 AM 145		11:00 AM 157			11:00 AM 157	
PM Peak Volume		5:00 PM 260	5:00 PM 226	5:00 PM 227		5:00 PM 238			5:00 PM 238	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: NW 30th St btwn NW Johnson Ave & NW Orchard Ave							QC JOB #: 15543962			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21		Hourly Traffic			Hourly Traffic	
12:00 AM		10	14	10		11			11	
01:00 AM		8	4	5		6			6	
02:00 AM		5	4	4		4			4	
03:00 AM		1	0	2		1			1	
04:00 AM		2	5	6		4			4	
05:00 AM		31	38	31		33			33	
06:00 AM		128	123	109		120			120	
07:00 AM		213	231	179		208			208	
08:00 AM		264	236	228		243			243	
09:00 AM		163	171	174		169			169	
10:00 AM		92	103	113		103			103	
11:00 AM		171	140	168		160			160	
12:00 PM		164	170	152		162			162	
01:00 PM		165	141	140		149			149	
02:00 PM		132	141	113		129			129	
03:00 PM		188	196	136		173			173	
04:00 PM		153	156	137		149			149	
05:00 PM		197	202	183		194			194	
06:00 PM		115	161	140		139			139	
07:00 PM		104	104	93		100			100	
08:00 PM		79	81	74		78			78	
09:00 PM		49	63	56		56			56	
10:00 PM		28	21	34		28			28	
11:00 PM		14	16	21		17			17	
<b>Day Total</b>		2476	2521	2308		2436			2436	
% Weekday Average		101.6%	103.5%	94.7%						
% Week Average		101.6%	103.5%	94.7%		100%				
AM Peak Volume		8:00 AM 264	8:00 AM 236	8:00 AM 228		8:00 AM 243			8:00 AM 243	
PM Peak Volume		5:00 PM 197	5:00 PM 202	5:00 PM 183		5:00 PM 194			5:00 PM 194	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: NW 30th St btwn NW Johnson Ave & NW Orchard Ave							QC JOB #: 15543962			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		20	22	18		20			20	
01:00 AM		17	10	13		13			13	
02:00 AM		8	5	5		6			6	
03:00 AM		1	3	3		2			2	
04:00 AM		2	8	12		7			7	
05:00 AM		38	44	36		39			39	
06:00 AM		139	131	115		128			128	
07:00 AM		286	315	236		279			279	
08:00 AM		352	325	293		323			323	
09:00 AM		292	279	289		287			287	
10:00 AM		206	206	203		205			205	
11:00 AM		345	291	313		316			316	
12:00 PM		327	308	297		311			311	
01:00 PM		326	294	300		307			307	
02:00 PM		287	293	245		275			275	
03:00 PM		388	390	322		367			367	
04:00 PM		313	336	338		329			329	
05:00 PM		457	428	410		432			432	
06:00 PM		274	347	302		308			308	
07:00 PM		236	227	230		231			231	
08:00 PM		199	279	213		230			230	
09:00 PM		117	128	159		135			135	
10:00 PM		85	66	79		77			77	
11:00 PM		29	35	41		35			35	
<b>Day Total</b>		4744	4770	4472		4662			4662	
% Weekday Average		101.8%	102.3%	95.9%						
% Week Average		101.8%	102.3%	95.9%		100%				
AM Peak Volume		8:00 AM 352	8:00 AM 325	11:00 AM 313		8:00 AM 323			8:00 AM 323	
PM Peak Volume		5:00 PM 457	5:00 PM 428	5:00 PM 410		5:00 PM 432			5:00 PM 432	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 14th St btwn NW Monroe Ave & SW Campus Way							QC JOB #: 15543963			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		10	8	13		10			10	
01:00 AM		3	5	5		4			4	
02:00 AM		5	2	7		5			5	
03:00 AM		3	1	3		2			2	
04:00 AM		3	2	4		3			3	
05:00 AM		7	6	2		5			5	
06:00 AM		11	17	15		14			14	
07:00 AM		36	46	30		37			37	
08:00 AM		44	45	49		46			46	
09:00 AM		43	53	48		48			48	
10:00 AM		56	53	64		58			58	
11:00 AM		71	76	63		70			70	
12:00 PM		85	77	109		90			90	
01:00 PM		82	86	95		88			88	
02:00 PM		89	82	98		90			90	
03:00 PM		95	96	110		100			100	
04:00 PM		114	114	122		117			117	
05:00 PM		109	116	128		118			118	
06:00 PM		86	102	86		91			91	
07:00 PM		72	70	83		75			75	
08:00 PM		75	82	62		73			73	
09:00 PM		65	58	55		59			59	
10:00 PM		48	39	46		44			44	
11:00 PM		13	13	23		16			16	
<b>Day Total</b>		1225	1249	1320		1263			1263	
% Weekday Average		97%	98.9%	104.5%						
% Week Average		97%	98.9%	104.5%		100%				
AM Peak Volume		11:00 AM 71	11:00 AM 76	10:00 AM 64		11:00 AM 70			11:00 AM 70	
PM Peak Volume		4:00 PM 114	5:00 PM 116	5:00 PM 128		5:00 PM 118			5:00 PM 118	

Comments:

Report generated on 10/27/2021 2:19 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 14th St btwn NW Monroe Ave & SW Campus Way							QC JOB #: 15543963			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		50	68	61		60			60	
01:00 AM		25	28	36		30			30	
02:00 AM		20	23	17		20			20	
03:00 AM		12	5	11		9			9	
04:00 AM		15	11	4		10			10	
05:00 AM		55	61	40		52			52	
06:00 AM		98	73	87		86			86	
07:00 AM		275	253	225		251			251	
08:00 AM		350	314	318		327			327	
09:00 AM		337	378	358		358			358	
10:00 AM		313	323	332		323			323	
11:00 AM		454	422	477		451			451	
12:00 PM		524	515	437		492			492	
01:00 PM		554	447	474		492			492	
02:00 PM		488	477	481		482			482	
03:00 PM		532	514	520		522			522	
04:00 PM		510	520	558		529			529	
05:00 PM		649	607	644		633			633	
06:00 PM		556	578	507		547			547	
07:00 PM		498	427	464		463			463	
08:00 PM		379	413	476		423			423	
09:00 PM		326	308	321		318			318	
10:00 PM		213	190	188		197			197	
11:00 PM		109	125	144		126			126	
Day Total		7342	7080	7180		7201			7201	
% Weekday Average		102%	98.3%	99.7%						
% Week Average		102%	98.3%	99.7%		100%				
AM Peak Volume		11:00 AM 454	11:00 AM 422	11:00 AM 477		11:00 AM 451			11:00 AM 451	
PM Peak Volume		5:00 PM 649	5:00 PM 607	5:00 PM 644		5:00 PM 633			5:00 PM 633	

Comments:

Report generated on 10/27/2021 2:19 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)



Type of report: Tube Count - Volume Data

LOCATION: SW 14th St btwn NW Monroe Ave & SW Campus Way							QC JOB #: 15543963			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		60	76	74		70			70	
01:00 AM		28	33	41		34			34	
02:00 AM		25	25	24		25			25	
03:00 AM		15	6	14		12			12	
04:00 AM		18	13	8		13			13	
05:00 AM		62	67	42		57			57	
06:00 AM		109	90	102		100			100	
07:00 AM		311	299	255		288			288	
08:00 AM		394	359	367		373			373	
09:00 AM		380	431	406		406			406	
10:00 AM		369	376	396		380			380	
11:00 AM		525	498	540		521			521	
12:00 PM		609	592	546		582			582	
01:00 PM		636	533	569		579			579	
02:00 PM		577	559	579		572			572	
03:00 PM		627	610	630		622			622	
04:00 PM		624	634	680		646			646	
05:00 PM		758	723	772		751			751	
06:00 PM		642	680	593		638			638	
07:00 PM		570	497	547		538			538	
08:00 PM		454	495	538		496			496	
09:00 PM		391	366	376		378			378	
10:00 PM		261	229	234		241			241	
11:00 PM		122	138	167		142			142	
Day Total		8567	8329	8500		8464			8464	
% Weekday Average		101.2%	98.4%	100.4%						
% Week Average		101.2%	98.4%	100.4%		100%				
AM Peak Volume		11:00 AM 525	11:00 AM 498	11:00 AM 540		11:00 AM 521			11:00 AM 521	
PM Peak Volume		5:00 PM 758	5:00 PM 723	5:00 PM 772		5:00 PM 751			5:00 PM 751	

Comments:

Report generated on 10/27/2021 2:19 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Jefferson Way btwn SW 30th St & SW Sackett Pl							QC JOB #: 15543964			
SPECIFIC LOCATION:							DIRECTION: EB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		5	5	3		4			4	
01:00 AM		0	5	2		2			2	
02:00 AM		0	0	3		1			1	
03:00 AM		2	2	2		2			2	
04:00 AM		1	1	4		2			2	
05:00 AM		8	12	11		10			10	
06:00 AM		12	15	11		13			13	
07:00 AM		23	34	40		32			32	
08:00 AM		56	56	51		54			54	
09:00 AM		63	47	59		56			56	
10:00 AM		37	38	29		35			35	
11:00 AM		48	45	44		46			46	
12:00 PM		40	50	59		50			50	
01:00 PM		37	49	49		45			45	
02:00 PM		51	46	40		46			46	
03:00 PM		47	62	55		55			55	
04:00 PM		42	47	32		40			40	
05:00 PM		60	60	72		64			64	
06:00 PM		43	72	69		61			61	
07:00 PM		49	38	44		44			44	
08:00 PM		38	46	30		38			38	
09:00 PM		27	26	32		28			28	
10:00 PM		15	13	12		13			13	
11:00 PM		6	9	8		8			8	
<b>Day Total</b>		710	778	761		749			749	
% Weekday Average		94.8%	103.9%	101.6%						
% Week Average		94.8%	103.9%	101.6%		100%				
AM Peak Volume		9:00 AM 63	8:00 AM 56	9:00 AM 59		9:00 AM 56			9:00 AM 56	
PM Peak Volume		5:00 PM 60	6:00 PM 72	5:00 PM 72		5:00 PM 64			5:00 PM 64	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Jefferson Way btwn SW 30th St & SW Sackett Pl							QC JOB #: 15543964			
SPECIFIC LOCATION:							DIRECTION: WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21		Hourly Traffic			Hourly Traffic	
12:00 AM		4	10	11		8			8	
01:00 AM		7	1	5		4			4	
02:00 AM		0	3	1		1			1	
03:00 AM		1	3	1		2			2	
04:00 AM		1	1	4		2			2	
05:00 AM		7	5	2		5			5	
06:00 AM		9	19	15		14			14	
07:00 AM		33	27	24		28			28	
08:00 AM		43	51	45		46			46	
09:00 AM		65	48	55		56			56	
10:00 AM		49	49	48		49			49	
11:00 AM		65	70	74		70			70	
12:00 PM		71	54	49		58			58	
01:00 PM		53	62	74		63			63	
02:00 PM		60	53	65		59			59	
03:00 PM		81	75	61		72			72	
04:00 PM		68	40	72		60			60	
05:00 PM		72	67	93		77			77	
06:00 PM		68	87	93		83			83	
07:00 PM		56	50	45		50			50	
08:00 PM		50	46	57		51			51	
09:00 PM		31	32	33		32			32	
10:00 PM		25	23	27		25			25	
11:00 PM		9	13	11		11			11	
<b>Day Total</b>		928	889	965		926			926	
% Weekday Average		100.2%	96%	104.2%						
% Week Average		100.2%	96%	104.2%		100%				
AM Peak Volume		9:00 AM 65	11:00 AM 70	11:00 AM 74		11:00 AM 70			11:00 AM 70	
PM Peak Volume		3:00 PM 81	6:00 PM 87	5:00 PM 93		6:00 PM 83			6:00 PM 83	
<i>Comments:</i>										

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Jefferson Way btwn SW 30th St & SW Sackett Pl							QC JOB #: 15543964			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		9	15	14		13			13	
01:00 AM		7	6	7		7			7	
02:00 AM		0	3	4		2			2	
03:00 AM		3	5	3		4			4	
04:00 AM		2	2	8		4			4	
05:00 AM		15	17	13		15			15	
06:00 AM		21	34	26		27			27	
07:00 AM		56	61	64		60			60	
08:00 AM		99	107	96		101			101	
09:00 AM		128	95	114		112			112	
10:00 AM		86	87	77		83			83	
11:00 AM		113	115	118		115			115	
12:00 PM		111	104	108		108			108	
01:00 PM		90	111	123		108			108	
02:00 PM		111	99	105		105			105	
03:00 PM		128	137	116		127			127	
04:00 PM		110	87	104		100			100	
05:00 PM		132	127	165		141			141	
06:00 PM		111	159	162		144			144	
07:00 PM		105	88	89		94			94	
08:00 PM		88	92	87		89			89	
09:00 PM		58	58	65		60			60	
10:00 PM		40	36	39		38			38	
11:00 PM		15	22	19		19			19	
<b>Day Total</b>		1638	1667	1726		1676			1676	
% Weekday Average		97.7%	99.5%	103%						
% Week Average		97.7%	99.5%	103%		100%				
AM Peak Volume		9:00 AM 128	11:00 AM 115	11:00 AM 118		11:00 AM 115			11:00 AM 115	
PM Peak Volume		5:00 PM 132	6:00 PM 159	5:00 PM 165		6:00 PM 144			6:00 PM 144	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW Washington Way btwn SW Benton Pl & SW 15th St							QC JOB #: 15543966			
SPECIFIC LOCATION:							DIRECTION: EB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		14	30	26		23			23	
01:00 AM		10	8	16		11			11	
02:00 AM		11	4	6		7			7	
03:00 AM		5	2	6		4			4	
04:00 AM		4	3	4		4			4	
05:00 AM		10	8	2		7			7	
06:00 AM		19	25	16		20			20	
07:00 AM		58	77	40		58			58	
08:00 AM		85	84	81		83			83	
09:00 AM		88	115	107		103			103	
10:00 AM		104	108	113		108			108	
11:00 AM		138	141	180		153			153	
12:00 PM		139	156	145		147			147	
01:00 PM		163	146	164		158			158	
02:00 PM		138	150	175		154			154	
03:00 PM		183	189	172		181			181	
04:00 PM		191	178	207		192			192	
05:00 PM		209	217	217		214			214	
06:00 PM		162	161	187		170			170	
07:00 PM		132	130	160		141			141	
08:00 PM		143	179	180		167			167	
09:00 PM		136	141	145		141			141	
10:00 PM		96	73	84		84			84	
11:00 PM		40	32	39		37			37	
<b>Day Total</b>		2278	2357	2472		2367			2367	
% Weekday Average		96.2%	99.6%	104.4%						
% Week Average		96.2%	99.6%	104.4%		100%				
AM Peak Volume		11:00 AM 138	11:00 AM 141	11:00 AM 180		11:00 AM 153			11:00 AM 153	
PM Peak Volume		5:00 PM 209	5:00 PM 217	5:00 PM 217		5:00 PM 214			5:00 PM 214	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Washington Way btwn SW Benton Pl & SW 15th St							QC JOB #: 15543966			
SPECIFIC LOCATION:							DIRECTION: WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		16	16	12		15			15	
01:00 AM		5	10	4		6			6	
02:00 AM		2	3	1		2			2	
03:00 AM		2	0	5		2			2	
04:00 AM		1	3	3		2			2	
05:00 AM		15	69	13		32			32	
06:00 AM		44	41	38		41			41	
07:00 AM		114	103	115		111			111	
08:00 AM		165	139	146		150			150	
09:00 AM		129	125	151		135			135	
10:00 AM		121	106	104		110			110	
11:00 AM		142	147	118		136			136	
12:00 PM		131	152	115		133			133	
01:00 PM		171	125	136		144			144	
02:00 PM		159	153	132		148			148	
03:00 PM		137	165	129		144			144	
04:00 PM		131	138	144		138			138	
05:00 PM		200	183	199		194			194	
06:00 PM		140	169	170		160			160	
07:00 PM		158	129	121		136			136	
08:00 PM		107	98	144		116			116	
09:00 PM		60	93	70		74			74	
10:00 PM		34	44	40		39			39	
11:00 PM		19	22	23		21			21	
Day Total		2203	2233	2133		2189			2189	
% Weekday Average		100.6%	102%	97.4%						
% Week Average		100.6%	102%	97.4%		100%				
AM Peak Volume		8:00 AM 165	11:00 AM 147	9:00 AM 151		8:00 AM 150			8:00 AM 150	
PM Peak Volume		5:00 PM 200	5:00 PM 183	5:00 PM 199		5:00 PM 194			5:00 PM 194	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Washington Way btwn SW Benton Pl & SW 15th St							QC JOB #: 15543966			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		30	46	38		38			38	
01:00 AM		15	18	20		18			18	
02:00 AM		13	7	7		9			9	
03:00 AM		7	2	11		7			7	
04:00 AM		5	6	7		6			6	
05:00 AM		25	77	15		39			39	
06:00 AM		63	66	54		61			61	
07:00 AM		172	180	155		169			169	
08:00 AM		250	223	227		233			233	
09:00 AM		217	240	258		238			238	
10:00 AM		225	214	217		219			219	
11:00 AM		280	288	298		289			289	
12:00 PM		270	308	260		279			279	
01:00 PM		334	271	300		302			302	
02:00 PM		297	303	307		302			302	
03:00 PM		320	354	301		325			325	
04:00 PM		322	316	351		330			330	
05:00 PM		409	400	416		408			408	
06:00 PM		302	330	357		330			330	
07:00 PM		290	259	281		277			277	
08:00 PM		250	277	324		284			284	
09:00 PM		196	234	215		215			215	
10:00 PM		130	117	124		124			124	
11:00 PM		59	54	62		58			58	
Day Total		4481	4590	4605		4560			4560	
% Weekday Average		98.3%	100.7%	101%						
% Week Average		98.3%	100.7%	101%		100%				
AM Peak Volume		11:00 AM 280	11:00 AM 288	11:00 AM 298		11:00 AM 289			11:00 AM 289	
PM Peak Volume		5:00 PM 409	5:00 PM 400	5:00 PM 416		5:00 PM 408			5:00 PM 408	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Stadium Ave btwn SW May Ave & SW Stadium Ave							QC JOB #: 15543967			
SPECIFIC LOCATION:							DIRECTION: EB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		3	3	3		3			3	
01:00 AM		4	3	5		4			4	
02:00 AM		1	0	0		0			0	
03:00 AM		0	0	0		0			0	
04:00 AM		0	0	0		0			0	
05:00 AM		0	0	0		0			0	
06:00 AM		3	2	2		2			2	
07:00 AM		8	4	4		5			5	
08:00 AM		1	4	4		3			3	
09:00 AM		11	7	8		9			9	
10:00 AM		23	10	19		17			17	
11:00 AM		28	15	18		20			20	
12:00 PM		26	36	35		32			32	
01:00 PM		33	34	38		35			35	
02:00 PM		34	27	57		39			39	
03:00 PM		54	49	52		52			52	
04:00 PM		43	52	60		52			52	
05:00 PM		60	34	56		50			50	
06:00 PM		23	34	27		28			28	
07:00 PM		32	15	13		20			20	
08:00 PM		30	38	22		30			30	
09:00 PM		18	11	13		14			14	
10:00 PM		8	18	5		10			10	
11:00 PM		2	7	6		5			5	
<b>Day Total</b>		445	403	447		430			430	
% Weekday Average		103.5%	93.7%	104%						
% Week Average		103.5%	93.7%	104%		100%				
AM Peak Volume		11:00 AM 28	11:00 AM 15	10:00 AM 19		11:00 AM 20			11:00 AM 20	
PM Peak Volume		5:00 PM 60	4:00 PM 52	4:00 PM 60		3:00 PM 52			3:00 PM 52	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)



Type of report: Tube Count - Volume Data

LOCATION: SW Stadium Ave btwn SW May Ave & SW Stadium Ave							QC JOB #: 15543967			
SPECIFIC LOCATION:							DIRECTION: WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		8	4	7		6			6	
01:00 AM		2	4	4		3			3	
02:00 AM		1	2	1		1			1	
03:00 AM		2	0	0		1			1	
04:00 AM		0	0	0		0			0	
05:00 AM		3	4	6		4			4	
06:00 AM		19	20	22		20			20	
07:00 AM		30	27	24		27			27	
08:00 AM		40	63	60		54			54	
09:00 AM		58	58	69		62			62	
10:00 AM		32	45	27		35			35	
11:00 AM		36	44	47		42			42	
12:00 PM		32	44	47		41			41	
01:00 PM		47	40	53		47			47	
02:00 PM		24	29	32		28			28	
03:00 PM		23	25	29		26			26	
04:00 PM		22	21	33		25			25	
05:00 PM		21	26	32		26			26	
06:00 PM		36	40	25		34			34	
07:00 PM		38	21	23		27			27	
08:00 PM		21	16	21		19			19	
09:00 PM		22	22	18		21			21	
10:00 PM		15	22	5		14			14	
11:00 PM		7	9	5		7			7	
<b>Day Total</b>		539	586	590		570			570	
% Weekday Average		94.6%	102.8%	103.5%						
% Week Average		94.6%	102.8%	103.5%		100%				
AM Peak Volume		9:00 AM 58	8:00 AM 63	9:00 AM 69		9:00 AM 62			9:00 AM 62	
PM Peak Volume		1:00 PM 47	12:00 PM 44	1:00 PM 53		1:00 PM 47			1:00 PM 47	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW Stadium Ave btwn SW May Ave & SW Stadium Ave							QC JOB #: 15543967			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		11	7	10		9			9	
01:00 AM		6	7	9		7			7	
02:00 AM		2	2	1		2			2	
03:00 AM		2	0	0		1			1	
04:00 AM		0	0	0		0			0	
05:00 AM		3	4	6		4			4	
06:00 AM		22	22	24		23			23	
07:00 AM		38	31	28		32			32	
08:00 AM		41	67	64		57			57	
09:00 AM		69	65	77		70			70	
10:00 AM		55	55	46		52			52	
11:00 AM		64	59	65		63			63	
12:00 PM		58	80	82		73			73	
01:00 PM		80	74	91		82			82	
02:00 PM		58	56	89		68			68	
03:00 PM		77	74	81		77			77	
04:00 PM		65	73	93		77			77	
05:00 PM		81	60	88		76			76	
06:00 PM		59	74	52		62			62	
07:00 PM		70	36	36		47			47	
08:00 PM		51	54	43		49			49	
09:00 PM		40	33	31		35			35	
10:00 PM		23	40	10		24			24	
11:00 PM		9	16	11		12			12	
<b>Day Total</b>		984	989	1037		1002			1002	
% Weekday Average		98.2%	98.7%	103.5%						
% Week Average		98.2%	98.7%	103.5%		100%				
AM Peak Volume		9:00 AM 69	8:00 AM 67	9:00 AM 77		9:00 AM 70			9:00 AM 70	
PM Peak Volume		5:00 PM 81	12:00 PM 80	4:00 PM 93		1:00 PM 82			1:00 PM 82	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 15th St btwn SW A Ave & SW Western Blvd							QC JOB #: 15543968			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		18	20	28		22			22	
01:00 AM		10	15	12		12			12	
02:00 AM		5	4	5		5			5	
03:00 AM		7	3	5		5			5	
04:00 AM		14	6	8		9			9	
05:00 AM		33	57	29		40			40	
06:00 AM		72	61	81		71			71	
07:00 AM		215	231	222		223			223	
08:00 AM		265	213	231		236			236	
09:00 AM		247	249	248		248			248	
10:00 AM		172	187	181		180			180	
11:00 AM		273	245	242		253			253	
12:00 PM		221	224	215		220			220	
01:00 PM		260	220	228		236			236	
02:00 PM		234	208	216		219			219	
03:00 PM		238	225	254		239			239	
04:00 PM		238	239	220		232			232	
05:00 PM		247	258	265		257			257	
06:00 PM		246	271	218		245			245	
07:00 PM		179	144	189		171			171	
08:00 PM		152	155	155		154			154	
09:00 PM		100	122	120		114			114	
10:00 PM		63	53	66		61			61	
11:00 PM		29	55	36		40			40	
<b>Day Total</b>		3538	3465	3474		3492			3492	
% Weekday Average		101.3%	99.2%	99.5%						
% Week Average		101.3%	99.2%	99.5%		100%				
AM Peak Volume		11:00 AM 273	9:00 AM 249	9:00 AM 248		11:00 AM 253			11:00 AM 253	
PM Peak Volume		1:00 PM 260	6:00 PM 271	5:00 PM 265		5:00 PM 257			5:00 PM 257	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 15th St btwn SW A Ave & SW Western Blvd							QC JOB #: 15543968			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		24	33	42		33			33	
01:00 AM		14	13	21		16			16	
02:00 AM		10	9	7		9			9	
03:00 AM		6	4	5		5			5	
04:00 AM		11	5	7		8			8	
05:00 AM		18	14	16		16			16	
06:00 AM		34	30	36		33			33	
07:00 AM		103	96	98		99			99	
08:00 AM		145	119	132		132			132	
09:00 AM		123	158	148		143			143	
10:00 AM		147	132	147		142			142	
11:00 AM		213	207	162		194			194	
12:00 PM		259	201	233		231			231	
01:00 PM		231	210	210		217			217	
02:00 PM		247	221	239		236			236	
03:00 PM		277	273	254		268			268	
04:00 PM		263	244	270		259			259	
05:00 PM		265	289	265		273			273	
06:00 PM		263	260	255		259			259	
07:00 PM		213	198	232		214			214	
08:00 PM		171	198	229		199			199	
09:00 PM		146	134	161		147			147	
10:00 PM		89	89	103		94			94	
11:00 PM		50	60	81		64			64	
Day Total		3322	3197	3353		3291			3291	
% Weekday Average		100.9%	97.1%	101.9%						
% Week Average		100.9%	97.1%	101.9%		100%				
AM Peak Volume		11:00 AM 213	11:00 AM 207	11:00 AM 162		11:00 AM 194			11:00 AM 194	
PM Peak Volume		3:00 PM 277	5:00 PM 289	4:00 PM 270		5:00 PM 273			5:00 PM 273	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 15th St btwn SW A Ave & SW Western Blvd							QC JOB #: 15543968			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		42	53	70		55			55	
01:00 AM		24	28	33		28			28	
02:00 AM		15	13	12		13			13	
03:00 AM		13	7	10		10			10	
04:00 AM		25	11	15		17			17	
05:00 AM		51	71	45		56			56	
06:00 AM		106	91	117		105			105	
07:00 AM		318	327	320		322			322	
08:00 AM		410	332	363		368			368	
09:00 AM		370	407	396		391			391	
10:00 AM		319	319	328		322			322	
11:00 AM		486	452	404		447			447	
12:00 PM		480	425	448		451			451	
01:00 PM		491	430	438		453			453	
02:00 PM		481	429	455		455			455	
03:00 PM		515	498	508		507			507	
04:00 PM		501	483	490		491			491	
05:00 PM		512	547	530		530			530	
06:00 PM		509	531	473		504			504	
07:00 PM		392	342	421		385			385	
08:00 PM		323	353	384		353			353	
09:00 PM		246	256	281		261			261	
10:00 PM		152	142	169		154			154	
11:00 PM		79	115	117		104			104	
Day Total		6860	6662	6827		6782			6782	
% Weekday Average		101.2%	98.2%	100.7%						
% Week Average		101.2%	98.2%	100.7%		100%				
AM Peak Volume		11:00 AM 486	11:00 AM 452	11:00 AM 404		11:00 AM 447			11:00 AM 447	
PM Peak Volume		3:00 PM 515	5:00 PM 547	5:00 PM 530		5:00 PM 530			5:00 PM 530	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Western Blvd btwn SW Stadium Ave & SW 16th St							QC JOB #: 15543969			
SPECIFIC LOCATION:							DIRECTION: EB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		25	28	46		33			33	
01:00 AM		14	20	16		17			17	
02:00 AM		11	4	11		9			9	
03:00 AM		4	10	6		7			7	
04:00 AM		17	13	20		17			17	
05:00 AM		38	30	26		31			31	
06:00 AM		77	82	87		82			82	
07:00 AM		283	301	259		281			281	
08:00 AM		302	318	308		309			309	
09:00 AM		307	282	290		293			293	
10:00 AM		305	299	258		287			287	
11:00 AM		327	366	306		333			333	
12:00 PM		366	378	360		368			368	
01:00 PM		401	363	350		371			371	
02:00 PM		344	403	371		373			373	
03:00 PM		410	412	459		427			427	
04:00 PM		525	480	476		494			494	
05:00 PM		522	467	479		489			489	
06:00 PM		346	352	336		345			345	
07:00 PM		237	191	201		210			210	
08:00 PM		178	234	185		199			199	
09:00 PM		125	138	139		134			134	
10:00 PM		84	85	77		82			82	
11:00 PM		57	55	47		53			53	
Day Total		5305	5311	5113		5244			5244	
% Weekday Average		101.2%	101.3%	97.5%						
% Week Average		101.2%	101.3%	97.5%		100%				
AM Peak Volume		11:00 AM 327	11:00 AM 366	8:00 AM 308		11:00 AM 333			11:00 AM 333	
PM Peak Volume		4:00 PM 525	4:00 PM 480	5:00 PM 479		4:00 PM 494			4:00 PM 494	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW Western Blvd btwn SW Stadium Ave & SW 16th St							QC JOB #: 15543969			
SPECIFIC LOCATION:							DIRECTION: WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21		Hourly Traffic			Hourly Traffic	
12:00 AM		26	21	45		31			31	
01:00 AM		11	19	21		17			17	
02:00 AM		8	15	9		11			11	
03:00 AM		13	8	6		9			9	
04:00 AM		13	14	15		14			14	
05:00 AM		45	55	45		48			48	
06:00 AM		91	98	95		95			95	
07:00 AM		321	364	286		324			324	
08:00 AM		378	388	344		370			370	
09:00 AM		322	345	327		331			331	
10:00 AM		279	304	251		278			278	
11:00 AM		336	319	306		320			320	
12:00 PM		367	379	358		368			368	
01:00 PM		418	374	393		395			395	
02:00 PM		362	348	354		355			355	
03:00 PM		406	396	437		413			413	
04:00 PM		359	435	392		395			395	
05:00 PM		449	491	483		474			474	
06:00 PM		373	374	327		358			358	
07:00 PM		264	267	261		264			264	
08:00 PM		213	254	225		231			231	
09:00 PM		167	162	163		164			164	
10:00 PM		106	90	108		101			101	
11:00 PM		62	63	69		65			65	
Day Total		5389	5583	5320		5431			5431	
% Weekday Average		99.2%	102.8%	98%						
% Week Average		99.2%	102.8%	98%		100%				
AM Peak Volume		8:00 AM 378	8:00 AM 388	8:00 AM 344		8:00 AM 370			8:00 AM 370	
PM Peak Volume		5:00 PM 449	5:00 PM 491	5:00 PM 483		5:00 PM 474			5:00 PM 474	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW Western Blvd btwn SW Stadium Ave & SW 16th St							QC JOB #: 15543969			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		51	49	91		64			64	
01:00 AM		25	39	37		34			34	
02:00 AM		19	19	20		19			19	
03:00 AM		17	18	12		16			16	
04:00 AM		30	27	35		31			31	
05:00 AM		83	85	71		80			80	
06:00 AM		168	180	182		177			177	
07:00 AM		604	665	545		605			605	
08:00 AM		<b>680</b>	<b>706</b>	<b>652</b>		<b>679</b>			<b>679</b>	
09:00 AM		629	627	617		624			624	
10:00 AM		584	603	509		565			565	
11:00 AM		663	685	612		653			653	
12:00 PM		733	757	718		736			736	
01:00 PM		819	737	743		766			766	
02:00 PM		706	751	725		727			727	
03:00 PM		816	808	896		840			840	
04:00 PM		884	915	868		889			889	
05:00 PM		<b>971</b>	<b>958</b>	<b>962</b>		<b>964</b>			<b>964</b>	
06:00 PM		719	726	663		703			703	
07:00 PM		501	458	462		474			474	
08:00 PM		391	488	410		430			430	
09:00 PM		292	300	302		298			298	
10:00 PM		190	175	185		183			183	
11:00 PM		119	118	116		118			118	
<b>Day Total</b>		10694	10894	10433		10675			10675	
% Weekday Average		100.2%	102.1%	97.7%						
% Week Average		100.2%	102.1%	97.7%		100%				
AM Peak Volume		8:00 AM 680	8:00 AM 706	8:00 AM 652		8:00 AM 679			8:00 AM 679	
PM Peak Volume		5:00 PM 971	5:00 PM 958	5:00 PM 962		5:00 PM 964			5:00 PM 964	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)



Type of report: Tube Count - Volume Data

LOCATION: SW 26th St btwn SW Ralph Miller Ln & SW Western Blvd							QC JOB #: 15543970			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21						
12:00 AM		12	5	10		9			9	
01:00 AM		6	8	5		6			6	
02:00 AM		1	2	0		1			1	
03:00 AM		1	2	2		2			2	
04:00 AM		4	2	8		5			5	
05:00 AM		19	35	11		22			22	
06:00 AM		50	60	62		57			57	
07:00 AM		81	73	87		80			80	
08:00 AM		99	93	82		91			91	
09:00 AM		92	95	93		93			93	
10:00 AM		78	84	78		80			80	
11:00 AM		86	97	103		95			95	
12:00 PM		84	91	93		89			89	
01:00 PM		100	92	129		107			107	
02:00 PM		88	89	104		94			94	
03:00 PM		99	77	111		96			96	
04:00 PM		71	84	95		83			83	
05:00 PM		106	105	120		110			110	
06:00 PM		85	96	87		89			89	
07:00 PM		65	66	77		69			69	
08:00 PM		47	74	49		57			57	
09:00 PM		38	27	36		34			34	
10:00 PM		24	13	20		19			19	
11:00 PM		9	11	12		11			11	
<b>Day Total</b>		1345	1381	1474		1399			1399	
% Weekday Average		96.1%	98.7%	105.4%						
% Week Average		96.1%	98.7%	105.4%		100%				
AM Peak Volume		8:00 AM 99	11:00 AM 97	11:00 AM 103		11:00 AM 95			11:00 AM 95	
PM Peak Volume		5:00 PM 106	5:00 PM 105	1:00 PM 129		5:00 PM 110			5:00 PM 110	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW 26th St btwn SW Ralph Miller Ln & SW Western Blvd							QC JOB #: 15543970			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		5	3	5		4			4	
01:00 AM		3	5	4		4			4	
02:00 AM		3	1	1		2			2	
03:00 AM		0	0	0		0			0	
04:00 AM		1	0	1		1			1	
05:00 AM		7	8	6		7			7	
06:00 AM		9	10	7		9			9	
07:00 AM		23	41	28		31			31	
08:00 AM		39	52	47		46			46	
09:00 AM		39	49	66		51			51	
10:00 AM		63	52	46		54			54	
11:00 AM		82	65	84		77			77	
12:00 PM		69	84	74		76			76	
01:00 PM		80	61	77		73			73	
02:00 PM		63	75	89		76			76	
03:00 PM		60	83	80		74			74	
04:00 PM		86	73	95		85			85	
05:00 PM		104	135	90		110			110	
06:00 PM		63	78	15		52			52	
07:00 PM		70	50	17		46			46	
08:00 PM		45	65	22		44			44	
09:00 PM		34	30	3		22			22	
10:00 PM		17	25	4		15			15	
11:00 PM		1	6	1		3			3	
Day Total		966	1051	862		962			962	
% Weekday Average		100.4%	109.3%	89.6%						
% Week Average		100.4%	109.3%	89.6%		100%				
AM Peak Volume		11:00 AM 82	11:00 AM 65	11:00 AM 84		11:00 AM 77			11:00 AM 77	
PM Peak Volume		5:00 PM 104	5:00 PM 135	4:00 PM 95		5:00 PM 110			5:00 PM 110	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW 26th St btwn SW Ralph Miller Ln & SW Western Blvd							QC JOB #: 15543970			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		17	8	15		13			13	
01:00 AM		9	13	9		10			10	
02:00 AM		4	3	1		3			3	
03:00 AM		1	2	2		2			2	
04:00 AM		5	2	9		5			5	
05:00 AM		26	43	17		29			29	
06:00 AM		59	70	69		66			66	
07:00 AM		104	114	115		111			111	
08:00 AM		138	145	129		137			137	
09:00 AM		131	144	159		145			145	
10:00 AM		141	136	124		134			134	
11:00 AM		168	162	187		172			172	
12:00 PM		153	175	167		165			165	
01:00 PM		180	153	206		180			180	
02:00 PM		151	164	193		169			169	
03:00 PM		159	160	191		170			170	
04:00 PM		157	157	190		168			168	
05:00 PM		210	240	210		220			220	
06:00 PM		148	174	102		141			141	
07:00 PM		135	116	94		115			115	
08:00 PM		92	139	71		101			101	
09:00 PM		72	57	39		56			56	
10:00 PM		41	38	24		34			34	
11:00 PM		10	17	13		13			13	
<b>Day Total</b>		2311	2432	2336		2359			2359	
% Weekday Average		98%	103.1%	99%						
% Week Average		98%	103.1%	99%		100%				
AM Peak Volume		11:00 AM 168	11:00 AM 162	11:00 AM 187		11:00 AM 172			11:00 AM 172	
PM Peak Volume		5:00 PM 210	5:00 PM 240	5:00 PM 210		5:00 PM 220			5:00 PM 220	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 30th St btwn Reser Stadium Dwy & SW Western Blvd							QC JOB #: 15543971			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		5	4	5		5			5	
01:00 AM		2	4	4		3			3	
02:00 AM		1	0	1		1			1	
03:00 AM		2	2	0		1			1	
04:00 AM		2	3	4		3			3	
05:00 AM		24	37	22		28			28	
06:00 AM		71	69	58		66			66	
07:00 AM		213	241	203		219			219	
08:00 AM		241	223	211		225			225	
09:00 AM		141	151	137		143			143	
10:00 AM		82	79	93		85			85	
11:00 AM		110	98	128		112			112	
12:00 PM		114	120	91		108			108	
01:00 PM		146	108	119		124			124	
02:00 PM		87	87	101		92			92	
03:00 PM		121	102	105		109			109	
04:00 PM		82	84	77		81			81	
05:00 PM		98	88	86		91			91	
06:00 PM		52	68	50		57			57	
07:00 PM		26	34	25		28			28	
08:00 PM		22	33	26		27			27	
09:00 PM		20	26	17		21			21	
10:00 PM		14	6	15		12			12	
11:00 PM		4	7	6		6			6	
<b>Day Total</b>		1680	1674	1584		1647			1647	
% Weekday Average		102%	101.6%	96.2%						
% Week Average		102%	101.6%	96.2%		100%				
AM Peak Volume		8:00 AM 241	7:00 AM 241	8:00 AM 211		8:00 AM 225			8:00 AM 225	
PM Peak Volume		1:00 PM 146	12:00 PM 120	1:00 PM 119		1:00 PM 124			1:00 PM 124	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW 30th St btwn Reser Stadium Dwy & SW Western Blvd							QC JOB #: 15543971			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		7	4	14		8			8	
01:00 AM		8	6	3		6			6	
02:00 AM		3	2	2		2			2	
03:00 AM		2	2	0		1			1	
04:00 AM		2	0	2		1			1	
05:00 AM		4	5	6		5			5	
06:00 AM		11	6	9		9			9	
07:00 AM		35	36	21		31			31	
08:00 AM		45	65	55		55			55	
09:00 AM		79	66	71		72			72	
10:00 AM		81	74	80		78			78	
11:00 AM		116	117	123		119			119	
12:00 PM		102	126	109		112			112	
01:00 PM		109	104	120		111			111	
02:00 PM		108	115	103		109			109	
03:00 PM		149	138	142		143			143	
04:00 PM		185	179	185		183			183	
05:00 PM		234	200	187		207			207	
06:00 PM		132	122	126		127			127	
07:00 PM		77	53	87		72			72	
08:00 PM		54	90	89		78			78	
09:00 PM		26	35	46		36			36	
10:00 PM		24	21	34		26			26	
11:00 PM		14	15	11		13			13	
<b>Day Total</b>		1607	1581	1625		1604			1604	
% Weekday Average		100.2%	98.6%	101.3%						
% Week Average		100.2%	98.6%	101.3%		100%				
AM Peak Volume		11:00 AM 116	11:00 AM 117	11:00 AM 123		11:00 AM 119			11:00 AM 119	
PM Peak Volume		5:00 PM 234	5:00 PM 200	5:00 PM 187		5:00 PM 207			5:00 PM 207	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 30th St btwn Reser Stadium Dwy & SW Western Blvd							QC JOB #: 15543971			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		12	8	19		13			13	
01:00 AM		10	10	7		9			9	
02:00 AM		4	2	3		3			3	
03:00 AM		4	4	0		3			3	
04:00 AM		4	3	6		4			4	
05:00 AM		28	42	28		33			33	
06:00 AM		82	75	67		75			75	
07:00 AM		248	277	224		250			250	
08:00 AM		286	288	266		280			280	
09:00 AM		220	217	208		215			215	
10:00 AM		163	153	173		163			163	
11:00 AM		226	215	251		231			231	
12:00 PM		216	246	200		221			221	
01:00 PM		255	212	239		235			235	
02:00 PM		195	202	204		200			200	
03:00 PM		270	240	247		252			252	
04:00 PM		267	263	262		264			264	
05:00 PM		332	288	273		298			298	
06:00 PM		184	190	176		183			183	
07:00 PM		103	87	112		101			101	
08:00 PM		76	123	115		105			105	
09:00 PM		46	61	63		57			57	
10:00 PM		38	27	49		38			38	
11:00 PM		18	22	17		19			19	
<b>Day Total</b>		3287	3255	3209		3252			3252	
% Weekday Average		101.1%	100.1%	98.7%						
% Week Average		101.1%	100.1%	98.7%		100%				
AM Peak Volume		8:00 AM 286	8:00 AM 288	8:00 AM 266		8:00 AM 280			8:00 AM 280	
PM Peak Volume		5:00 PM 332	5:00 PM 288	5:00 PM 273		5:00 PM 298			5:00 PM 298	

Comments:

Report generated on 10/26/2021 3:06 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn Sagebrush Dr & SW Western Blvd							QC JOB #: 15543972			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
	19 Oct 21	20 Oct 21	21 Oct 21			Hourly Traffic			Hourly Traffic	
12:00 AM		18	13	32		21			21	
01:00 AM		14	9	14		12			12	
02:00 AM		9	12	12		11			11	
03:00 AM		8	5	9		7			7	
04:00 AM		10	16	8		11			11	
05:00 AM		36	41	29		35			35	
06:00 AM		110	91	103		101			101	
07:00 AM		277	267	277		274			274	
08:00 AM		288	283	295		289			289	
09:00 AM		228	250	272		250			250	
10:00 AM		184	225	220		210			210	
11:00 AM		243	204	249		232			232	
12:00 PM		207	246	271		241			241	
01:00 PM		269	241	273		261			261	
02:00 PM		238	265	245		249			249	
03:00 PM		243	248	308		266			266	
04:00 PM		250	253	262		255			255	
05:00 PM		285	268	293		282			282	
06:00 PM		251	262	250		254			254	
07:00 PM		128	146	156		143			143	
08:00 PM		113	130	120		121			121	
09:00 PM		81	92	75		83			83	
10:00 PM		58	62	55		58			58	
11:00 PM		29	43	38		37			37	
<b>Day Total</b>		3577	3672	3866		3703			3703	
% Weekday Average		96.6%	99.2%	104.4%						
% Week Average		96.6%	99.2%	104.4%		100%				
AM Peak Volume		8:00 AM 288	8:00 AM 283	8:00 AM 295		8:00 AM 289			8:00 AM 289	
PM Peak Volume		5:00 PM 285	5:00 PM 268	3:00 PM 308		5:00 PM 282			5:00 PM 282	

Comments:

Report generated on 10/26/2021 3:07 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn Sagebrush Dr & SW Western Blvd							QC JOB #: 15543972			
SPECIFIC LOCATION:							DIRECTION: SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		18	14	25		19			19	
01:00 AM		12	9	13		11			11	
02:00 AM		4	6	6		5			5	
03:00 AM		10	7	9		9			9	
04:00 AM		12	13	10		12			12	
05:00 AM		25	28	28		27			27	
06:00 AM		68	61	53		61			61	
07:00 AM		114	144	138		132			132	
08:00 AM		199	192	212		201			201	
09:00 AM		204	198	205		202			202	
10:00 AM		193	184	201		193			193	
11:00 AM		222	243	227		231			231	
12:00 PM		240	272	250		254			254	
01:00 PM		226	279	270		258			258	
02:00 PM		281	308	319		303			303	
03:00 PM		333	301	343		326			326	
04:00 PM		393	368	386		382			382	
05:00 PM		426	343	390		386			386	
06:00 PM		261	229	267		252			252	
07:00 PM		164	163	151		159			159	
08:00 PM		117	162	171		150			150	
09:00 PM		77	92	82		84			84	
10:00 PM		62	70	67		66			66	
11:00 PM		37	47	40		41			41	
<b>Day Total</b>		3698	3733	3863		3764			3764	
% Weekday Average		98.2%	99.2%	102.6%						
% Week Average		98.2%	99.2%	102.6%		100%				
AM Peak Volume		11:00 AM 222	11:00 AM 243	11:00 AM 227		11:00 AM 231			11:00 AM 231	
PM Peak Volume		5:00 PM 426	4:00 PM 368	5:00 PM 390		5:00 PM 386			5:00 PM 386	

Comments:



Type of report: Tube Count - Volume Data

LOCATION: SW 35th St btwn Sagebrush Dr & SW Western Blvd							QC JOB #: 15543972			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		36	27	57		40			40	
01:00 AM		26	18	27		24			24	
02:00 AM		13	18	18		16			16	
03:00 AM		18	12	18		16			16	
04:00 AM		22	29	18		23			23	
05:00 AM		61	69	57		62			62	
06:00 AM		178	152	156		162			162	
07:00 AM		391	411	415		406			406	
08:00 AM		<b>487</b>	<b>475</b>	<b>507</b>		<b>490</b>			<b>490</b>	
09:00 AM		432	448	477		452			452	
10:00 AM		377	409	421		402			402	
11:00 AM		465	447	476		463			463	
12:00 PM		447	518	521		495			495	
01:00 PM		495	520	543		519			519	
02:00 PM		519	573	564		552			552	
03:00 PM		576	549	651		592			592	
04:00 PM		643	<b>621</b>	648		637			637	
05:00 PM		<b>711</b>	611	<b>683</b>		<b>668</b>			<b>668</b>	
06:00 PM		512	491	517		507			507	
07:00 PM		292	309	307		303			303	
08:00 PM		230	292	291		271			271	
09:00 PM		158	184	157		166			166	
10:00 PM		120	132	122		125			125	
11:00 PM		66	90	78		78			78	
<b>Day Total</b>		7275	7405	7729		7469			7469	
% Weekday Average		97.4%	99.1%	103.5%						
% Week Average		97.4%	99.1%	103.5%		100%				
AM Peak Volume		8:00 AM 487	8:00 AM 475	8:00 AM 507		8:00 AM 490			8:00 AM 490	
PM Peak Volume		5:00 PM 711	4:00 PM 621	5:00 PM 683		5:00 PM 668			5:00 PM 668	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW Intramural Ln E of SW 30th St							QC JOB #: 15543981			
SPECIFIC LOCATION:							DIRECTION: EB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		1	2	3		2			2	
01:00 AM		0	0	1		0			0	
02:00 AM		0	0	0		0			0	
03:00 AM		0	0	0		0			0	
04:00 AM		0	0	0		0			0	
05:00 AM		0	3	4		2			2	
06:00 AM		1	6	2		3			3	
07:00 AM		3	2	5		3			3	
08:00 AM		3	10	6		6			6	
09:00 AM		10	2	2		5			5	
10:00 AM		6	5	12		8			8	
11:00 AM		6	6	10		7			7	
12:00 PM		2	5	10		6			6	
01:00 PM		5	7	8		7			7	
02:00 PM		5	3	4		4			4	
03:00 PM		7	7	10		8			8	
04:00 PM		9	4	8		7			7	
05:00 PM		8	10	13		10			10	
06:00 PM		12	11	12		12			12	
07:00 PM		8	13	8		10			10	
08:00 PM		13	10	6		10			10	
09:00 PM		0	6	3		3			3	
10:00 PM		1	6	7		5			5	
11:00 PM		1	0	0		0			0	
<b>Day Total</b>		101	118	134		118			118	
% Weekday Average		85.6%	100%	113.6%						
% Week Average		85.6%	100%	113.6%		100%				
AM Peak Volume		9:00 AM 10	8:00 AM 10	10:00 AM 12		10:00 AM 8			10:00 AM 8	
PM Peak Volume		8:00 PM 13	7:00 PM 13	5:00 PM 13		6:00 PM 12			6:00 PM 12	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: SW Intramural Ln E of SW 30th St							QC JOB #: 15543981			
SPECIFIC LOCATION:							DIRECTION: WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon 19 Oct 21	Tue 20 Oct 21	Wed 21 Oct 21	Thu 21 Oct 21	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		3	1	0		1			1	
01:00 AM		0	2	2		1			1	
02:00 AM		1	0	0		0			0	
03:00 AM		0	0	0		0			0	
04:00 AM		0	0	0		0			0	
05:00 AM		0	0	1		0			0	
06:00 AM		1	6	2		3			3	
07:00 AM		5	12	4		7			7	
08:00 AM		3	6	2		4			4	
09:00 AM		9	10	12		10			10	
10:00 AM		7	4	5		5			5	
11:00 AM		8	8	15		10			10	
12:00 PM		2	9	10		7			7	
01:00 PM		12	12	11		12			12	
02:00 PM		12	12	15		13			13	
03:00 PM		13	11	15		13			13	
04:00 PM		12	8	12		11			11	
05:00 PM		21	21	20		21			21	
06:00 PM		27	12	34		24			24	
07:00 PM		16	18	26		20			20	
08:00 PM		20	20	13		18			18	
09:00 PM		12	10	18		13			13	
10:00 PM		5	5	3		4			4	
11:00 PM		6	4	2		4			4	
<b>Day Total</b>		195	191	222		201			201	
% Weekday Average		97%	95%	110.4%						
% Week Average		97%	95%	110.4%		100%				
AM Peak Volume		9:00 AM 9	7:00 AM 12	11:00 AM 15		9:00 AM 10			9:00 AM 10	
PM Peak Volume		6:00 PM 27	5:00 PM 21	6:00 PM 34		6:00 PM 24			6:00 PM 24	

Comments:

Type of report: Tube Count - Volume Data

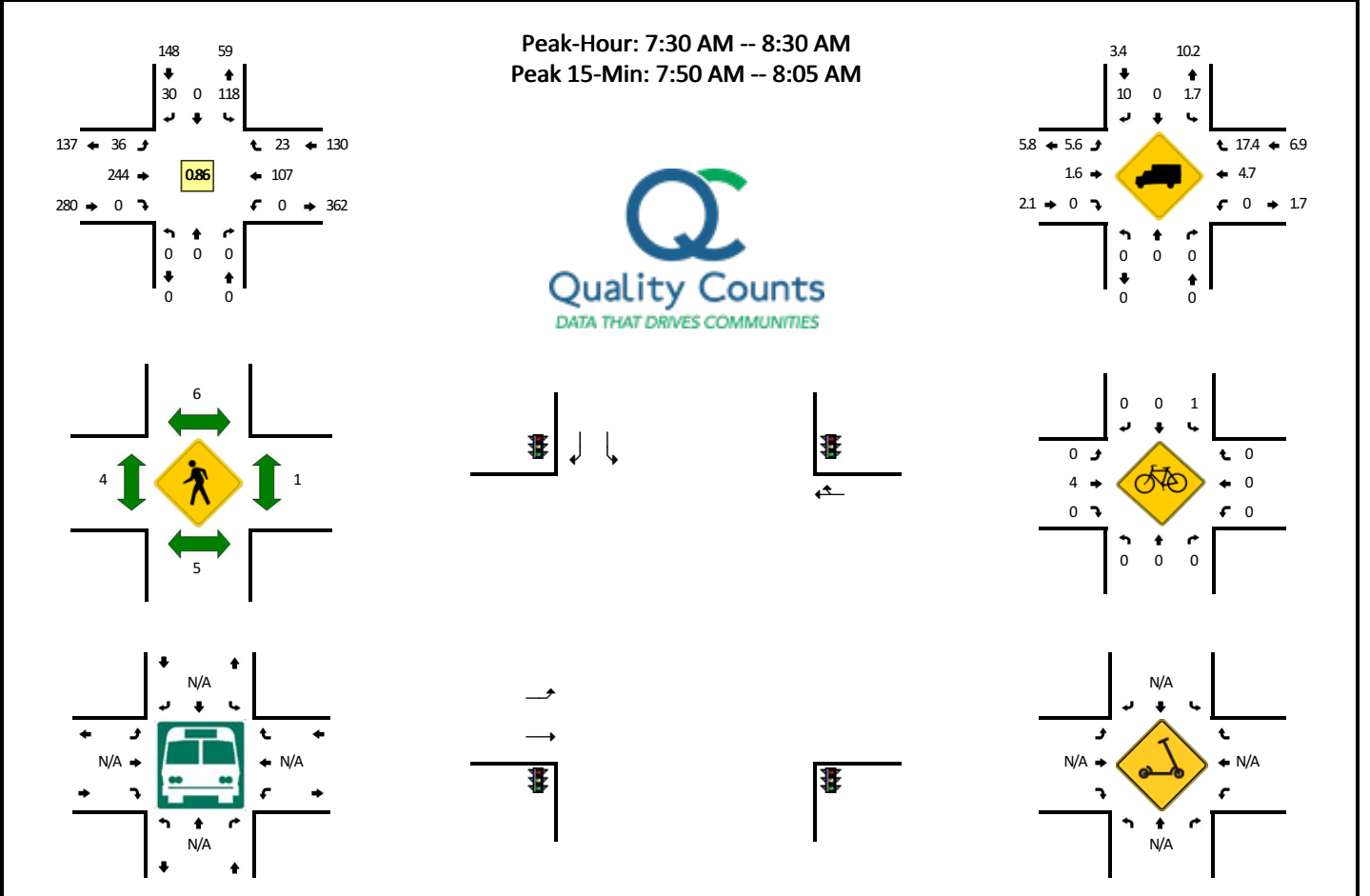
LOCATION: SW Intramural Ln E of SW 30th St							QC JOB #: 15543981			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Corvallis, OR							DATE: Oct 19 2021 - Oct 21 2021			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
		19 Oct 21	20 Oct 21	21 Oct 21		Hourly Traffic			Hourly Traffic	
12:00 AM		4	3	3		3			3	
01:00 AM		0	2	3		2			2	
02:00 AM		1	0	0		0			0	
03:00 AM		0	0	0		0			0	
04:00 AM		0	0	0		0			0	
05:00 AM		0	3	5		3			3	
06:00 AM		2	12	4		6			6	
07:00 AM		8	14	9		10			10	
08:00 AM		6	16	8		10			10	
09:00 AM		19	12	14		15			15	
10:00 AM		13	9	17		13			13	
11:00 AM		14	14	25		18			18	
12:00 PM		4	14	20		13			13	
01:00 PM		17	19	19		18			18	
02:00 PM		17	15	19		17			17	
03:00 PM		20	18	25		21			21	
04:00 PM		21	12	20		18			18	
05:00 PM		29	31	33		31			31	
06:00 PM		39	23	46		36			36	
07:00 PM		24	31	34		30			30	
08:00 PM		33	30	19		27			27	
09:00 PM		12	16	21		16			16	
10:00 PM		6	11	10		9			9	
11:00 PM		7	4	2		4			4	
<b>Day Total</b>		296	309	356		320			320	
% Weekday Average		92.5%	96.6%	111.3%						
% Week Average		92.5%	96.6%	111.3%		100%				
AM Peak Volume		9:00 AM 19	8:00 AM 16	11:00 AM 25		11:00 AM 18			11:00 AM 18	
PM Peak Volume		6:00 PM 39	5:00 PM 31	6:00 PM 46		6:00 PM 36			6:00 PM 36	

Comments:

## Appendix B Intersection Count Data

**LOCATION:** 1 - NW 36th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439154  
**DATE:** Tue, Oct 19 2021

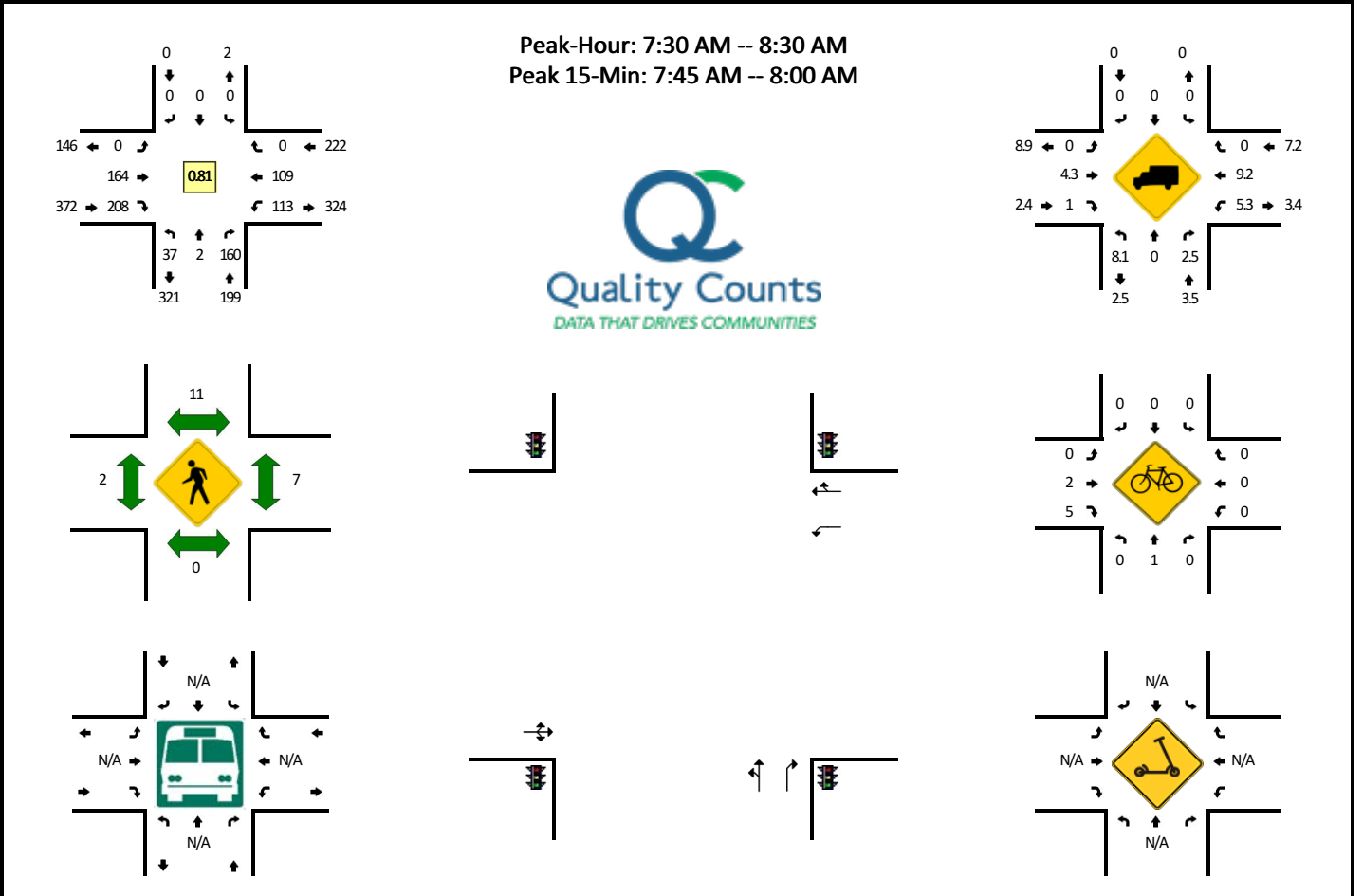


5-Min Count Period Beginning At	1 - NW 36th St (Northbound)				1 - NW 36th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	0	0	0	10	0	0	0	0	23	0	0	0	5	1	0	39	
7:35 AM	0	0	0	0	6	0	2	0	3	24	0	0	0	7	3	0	45	
7:40 AM	0	0	0	0	13	0	4	0	3	29	0	0	0	7	0	0	56	
7:45 AM	0	0	0	0	10	0	2	0	2	26	0	0	0	5	2	0	47	
7:50 AM	0	0	0	0	14	0	3	0	5	22	0	0	0	10	1	0	55	
7:55 AM	0	0	0	0	11	0	3	0	6	22	0	0	0	9	4	0	55	
8:00 AM	0	0	0	0	11	0	2	0	3	23	0	0	0	11	3	0	53	
8:05 AM	0	0	0	0	6	0	4	0	1	11	0	0	0	12	1	0	35	
8:10 AM	0	0	0	0	13	0	4	0	4	16	0	0	0	14	2	0	53	
8:15 AM	0	0	0	0	7	0	1	0	2	12	0	0	0	11	3	0	36	
8:20 AM	0	0	0	0	11	0	3	0	3	21	0	0	0	9	1	0	48	
8:25 AM	0	0	0	0	6	0	2	0	4	15	0	0	0	7	2	0	36	558
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	144	0	32	0	56	268	0	0	0	120	32	0	652	
Heavy Trucks	0	0	0	0	0	0	4	0	0	0	0	0	0	4	8	0	16	
Buses																		
Pedestrians		0				4				4				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

**LOCATION:** 2 - NW 35th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543989  
**DATE:** Tue, Oct 26 2021

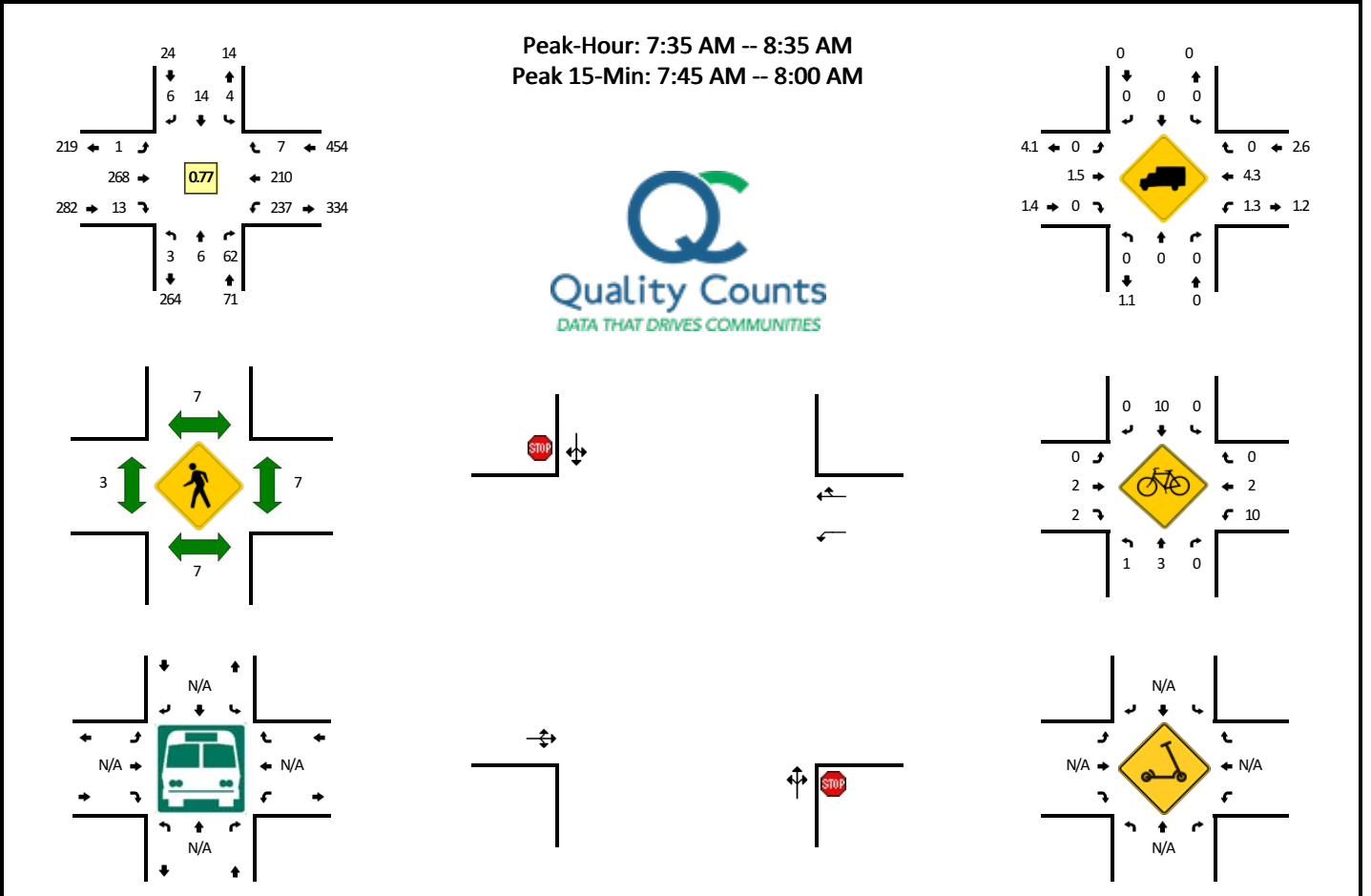


5-Min Count Period Beginning At	2 - NW 35th St (Northbound)				2 - NW 35th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	2	0	7	0	0	0	0	0	0	12	11	0	12	4	0	0	48	
7:35 AM	1	0	16	0	0	0	0	0	0	12	20	0	2	3	0	0	54	
7:40 AM	3	0	12	0	0	0	0	0	0	18	31	0	2	10	0	0	76	
7:45 AM	1	0	31	0	0	0	0	0	0	17	24	0	9	7	0	0	89	
7:50 AM	3	1	20	0	0	0	0	0	0	20	20	0	7	9	0	0	80	
7:55 AM	3	0	17	0	0	0	0	0	0	19	13	0	10	15	0	0	77	
8:00 AM	2	1	11	0	0	0	0	0	0	15	19	0	18	10	0	0	76	
8:05 AM	6	0	10	0	0	0	0	0	0	11	14	0	12	14	0	0	67	
8:10 AM	7	0	13	0	0	0	0	0	0	11	23	0	12	13	0	0	79	
8:15 AM	2	0	9	0	0	0	0	0	0	12	14	0	14	9	0	0	60	
8:20 AM	4	0	8	0	0	0	0	0	0	10	8	0	8	4	0	0	42	
8:25 AM	3	0	6	0	0	0	0	0	0	7	11	0	7	11	0	0	45	793
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	28	4	272	0	0	0	0	0	0	224	228	0	104	124	0	0	984	
Heavy Trucks Buses	0	0	8	0	0	0	0	0	0	0	4	0	4	16	0	0	32	
Pedestrians	0	0	0	0	0	4	0	0	0	0	0	0	0	12	0	0	16	
Bicycles	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	
Scoters																		

*Comments:*

**LOCATION:** 3 - NW 30th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543905  
**DATE:** Tue, Oct 19 2021



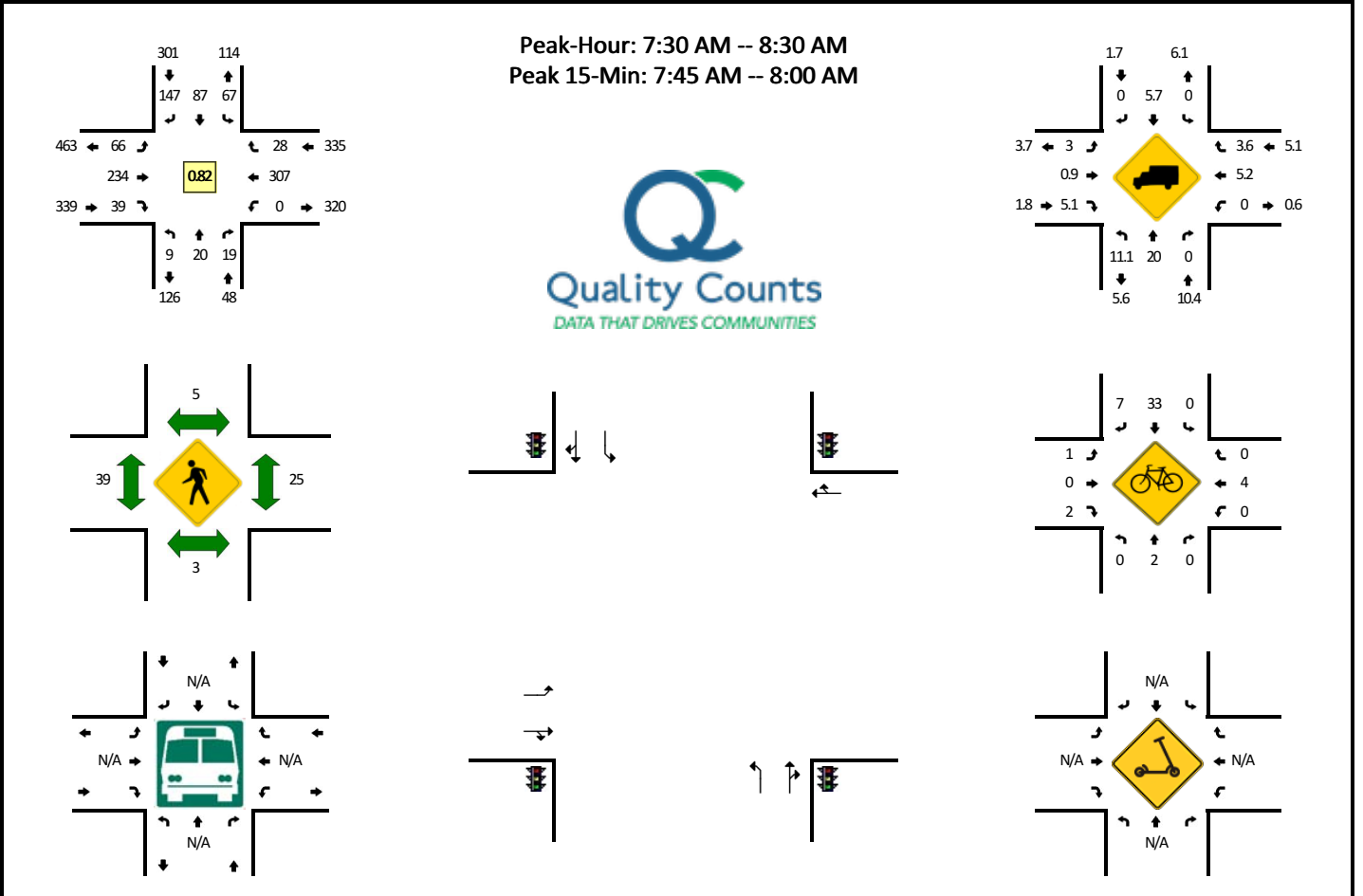
5-Min Count Period Beginning At	3 - NW 30th St (Northbound)				3 - NW 30th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	3	0	0	0	0	0	0	4	0	0	12	7	0	0	26	
7:05 AM	0	0	3	0	0	1	0	0	0	12	0	0	9	12	1	0	38	
7:10 AM	0	1	2	0	0	2	0	0	0	13	0	0	7	4	0	0	29	
7:15 AM	1	0	2	0	0	1	0	0	0	9	0	0	7	9	0	0	29	
7:20 AM	0	1	2	0	0	0	0	0	0	9	0	0	11	6	0	0	29	
7:25 AM	0	1	7	0	0	0	1	0	0	15	0	0	13	9	0	0	46	
7:30 AM	0	1	4	0	0	1	1	0	0	22	1	0	23	10	0	0	63	
7:35 AM	1	1	7	0	0	0	0	0	0	18	0	0	14	13	0	0	54	
7:40 AM	0	0	5	0	1	2	0	0	0	29	0	0	19	11	0	0	67	
7:45 AM	0	1	7	0	0	0	2	0	0	34	1	0	22	17	0	0	84	
7:50 AM	1	0	5	0	0	2	0	0	0	38	1	0	24	22	0	0	93	
7:55 AM	0	1	12	0	1	1	0	0	0	34	1	0	25	18	0	0	93	651
8:00 AM	0	0	6	0	0	0	0	0	0	22	1	0	19	22	0	0	70	695
8:05 AM	0	1	3	0	0	1	1	0	0	17	0	0	19	20	1	0	63	720
8:10 AM	1	1	4	0	0	3	0	0	0	11	1	0	22	19	0	0	62	753
8:15 AM	0	0	4	0	0	0	1	0	0	19	2	0	17	18	0	0	61	785
8:20 AM	0	1	5	0	0	4	2	0	1	12	1	0	26	13	1	0	66	822
8:25 AM	0	0	4	0	0	1	0	0	0	17	4	0	22	20	1	0	69	845
8:30 AM	0	0	0	0	2	0	0	0	0	17	1	0	8	17	4	0	49	831
8:35 AM	0	0	0	0	0	3	0	0	0	14	0	0	20	18	0	0	55	832
8:40 AM	0	0	0	0	1	0	0	0	0	17	0	0	21	12	1	0	52	817
8:45 AM	0	0	0	0	1	1	0	0	0	18	1	0	24	15	0	0	60	793
8:50 AM	1	0	1	0	0	0	0	0	0	15	1	0	13	17	1	0	49	749
8:55 AM	0	0	2	0	1	0	0	0	0	20	0	0	15	15	0	0	53	709
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	8	96	0	4	12	8	0	0	424	12	0	284	228	0	0	1080	
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	8	0	0	16	
Buses																		
Pedestrians		8				8				0				8			24	
Bicycles	0	0	0		0	8	0		0	0	0		4	0	0		12	
Scoters																		

Comments:



**LOCATION:** 4 - NW 29th St/NW Arnold Way -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543991  
**DATE:** Tue, Oct 19 2021



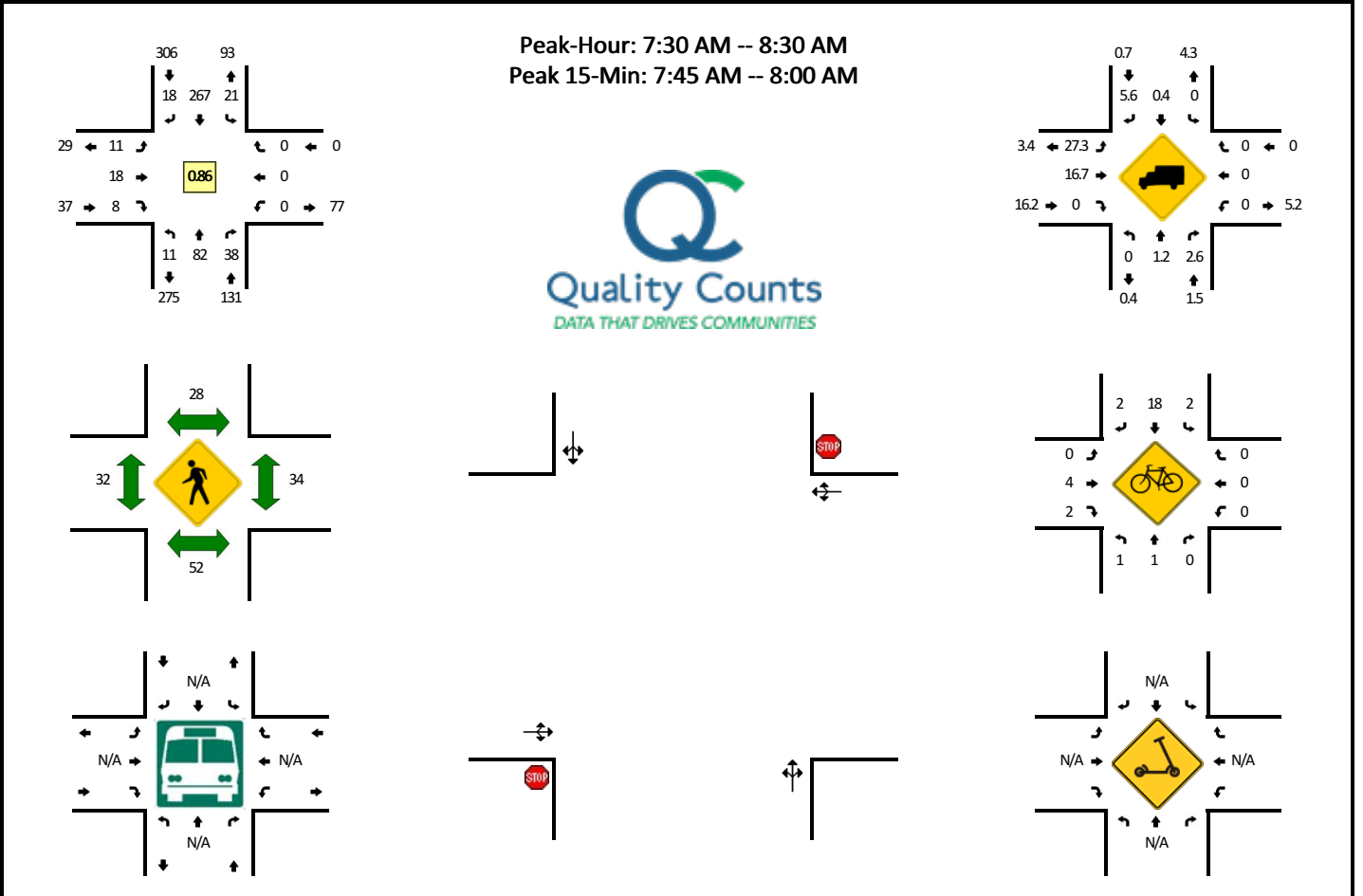
5-Min Count Period Beginning At	4 - NW 29th St/NW Arnold Way (Northbound)				4 - NW 29th St/NW Arnold Way (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	2	1	1	0	7	2	8	0	7	13	3	0	0	23	1	0	68	
7:35 AM	0	2	0	0	1	3	6	0	6	18	2	0	0	26	2	0	66	
7:40 AM	0	1	2	0	4	12	12	0	5	26	3	0	0	14	2	0	81	
7:45 AM	0	1	2	0	6	9	18	0	5	25	4	0	0	23	0	0	93	
7:50 AM	0	1	3	0	12	4	14	0	4	41	7	0	0	32	2	0	120	
7:55 AM	2	1	1	0	2	8	14	0	11	31	4	0	0	24	1	0	99	
8:00 AM	0	2	0	0	9	7	15	0	4	19	2	0	0	30	4	0	92	
8:05 AM	1	4	1	0	9	9	11	0	3	17	2	0	0	28	2	0	87	
8:10 AM	1	2	3	0	8	6	16	0	6	11	1	0	0	28	4	0	86	
8:15 AM	0	2	2	0	4	11	9	0	7	12	3	0	0	24	6	0	80	
8:20 AM	1	2	0	0	3	10	13	0	4	12	3	0	0	26	2	0	76	
8:25 AM	2	1	4	0	2	6	11	0	4	9	5	0	0	29	2	0	75	1023

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	12	24	0	80	84	184	0	80	388	60	0	0	316	12	0	1248
Heavy Trucks	0	4	0		0	0	0		4	0	4		0	12	0		24
Buses																	
Pedestrians		4				8				60				24			96
Bicycles	0	0	0		0	56	0		0	0	0		0	4	0		60
Scoters																	

Comments:

**LOCATION:** 5 - NW 30th St -- NW Orchard Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543993  
**DATE:** Tue, Oct 19 2021

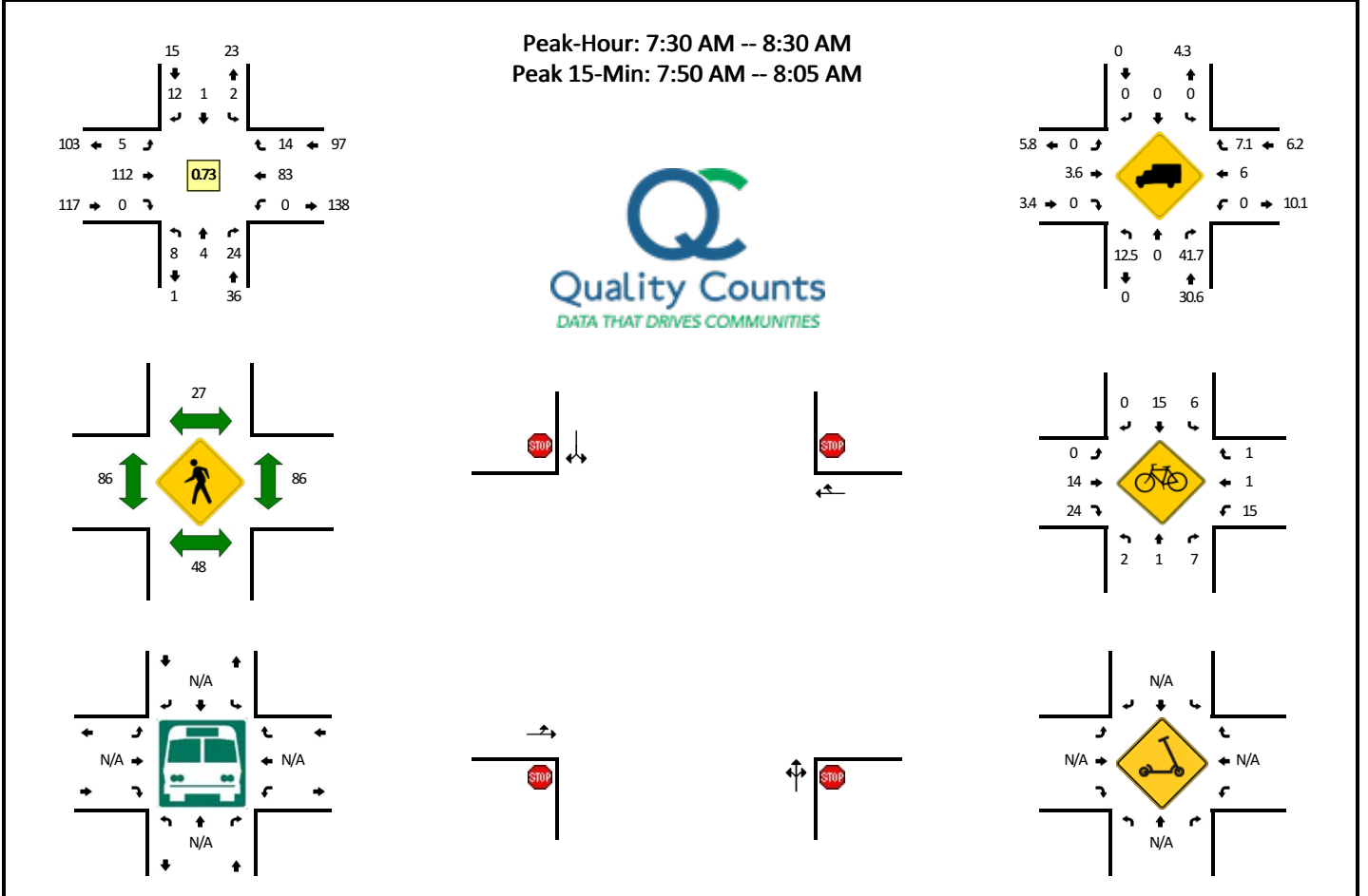


5-Min Count Period Beginning At	5 - NW 30th St (Northbound)				5 - NW 30th St (Southbound)				NW Orchard Ave (Eastbound)				NW Orchard Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	8	2	0	2	17	6	0	0	0	1	0	0	0	0	0	37	
7:35 AM	2	3	2	0	1	14	0	0	1	1	0	0	0	0	0	0	24	
7:40 AM	2	3	3	0	2	26	0	0	1	0	0	0	0	0	0	0	37	
7:45 AM	0	8	3	0	1	20	2	0	1	7	1	0	0	0	0	0	43	
7:50 AM	2	10	3	0	3	22	1	0	0	2	3	0	0	0	0	0	46	
7:55 AM	0	11	8	0	1	24	1	0	1	2	0	0	0	0	0	0	48	
8:00 AM	1	8	2	0	0	23	1	0	2	3	0	0	0	0	0	0	40	
8:05 AM	2	5	0	0	1	28	0	0	1	1	1	0	0	0	0	0	39	
8:10 AM	0	6	4	0	4	26	3	0	0	0	1	0	0	0	0	0	44	
8:15 AM	1	6	2	0	2	15	1	0	2	0	0	0	0	0	0	0	29	
8:20 AM	0	7	5	0	2	33	2	0	0	1	1	0	0	0	0	0	51	
8:25 AM	0	7	4	0	2	19	1	0	2	1	0	0	0	0	0	0	36	474
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	116	56	0	20	264	16	0	8	44	16	0	0	0	0	0	548	
Heavy Trucks	0	0	4	0	0	0	0	0	8	4	0	0	0	0	0	0	16	
Buses																		
Pedestrians		80				40				40				36			196	
Bicycles	4	0	0		4	24	0		0	8	0		0	0	0		40	
Scooters																		

Comments:

**LOCATION:** 6 - SW 26th St -- NW Arnold Way/NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543995  
**DATE:** Tue, Oct 19 2021



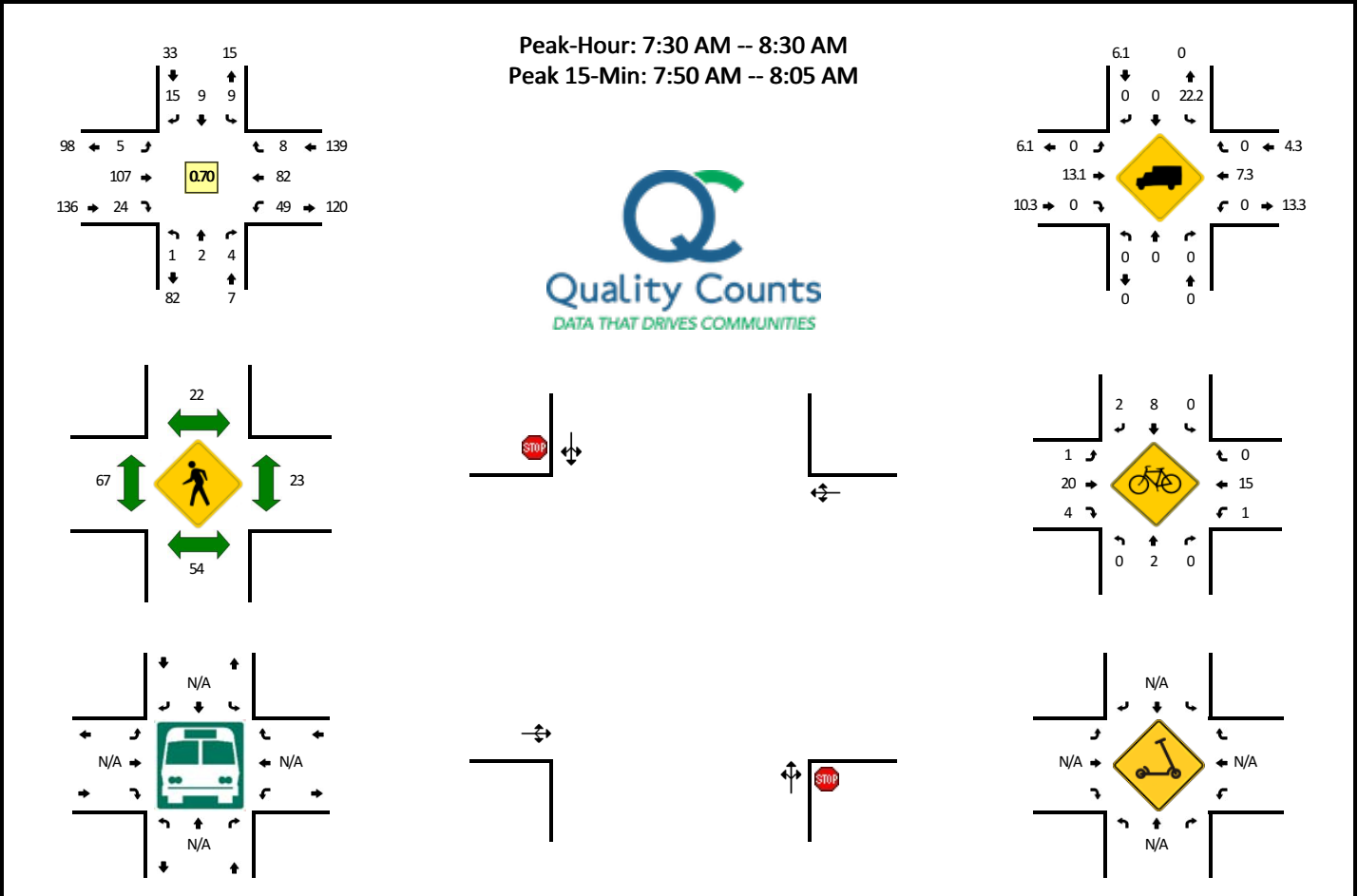
5-Min Count Period Beginning At	6 - SW 26th St (Northbound)				6 - SW 26th St (Southbound)				NW Arnold Way/NW Monroe Ave (Eastbound)				NW Arnold Way/NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	0	1	0	0	0	0	0	0	5	0	0	0	3	1	0	10	
7:35 AM	1	0	3	0	0	0	0	0	0	6	0	0	0	5	1	0	16	
7:40 AM	1	1	2	0	0	0	0	0	0	9	0	0	0	2	0	0	15	
7:45 AM	0	0	2	0	0	0	1	0	2	7	0	0	0	5	0	0	17	
7:50 AM	0	0	5	0	0	0	1	0	0	15	0	0	0	4	2	0	27	
7:55 AM	1	1	4	0	1	1	1	0	2	15	0	0	0	14	1	0	41	
8:00 AM	0	0	1	0	0	0	1	0	0	6	0	0	0	12	3	0	23	
8:05 AM	3	1	3	0	0	0	0	0	0	12	0	0	0	5	1	0	25	
8:10 AM	0	1	0	0	0	0	2	0	0	6	0	0	0	12	2	0	23	
8:15 AM	0	0	0	0	0	0	2	0	1	11	0	0	0	6	3	0	23	
8:20 AM	0	0	2	0	0	0	2	0	0	11	0	0	0	6	0	0	21	
8:25 AM	2	0	1	0	1	0	2	0	0	9	0	0	0	9	0	0	24	265

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	40	0	4	4	12	0	8	144	0	0	0	120	24	0	364
Heavy Trucks	0	0	4		0	0	0		0	0	0		0	8	0		12
Buses																	
Pedestrians		40				52				64				92			248
Bicycles	4	0	12		4	20	0		0	12	32		20	4	0		108
Scoters																	

Comments:

**LOCATION:** 7 - NW 25th St/SW Park Terrace Pl -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543997  
**DATE:** Tue, Oct 19 2021



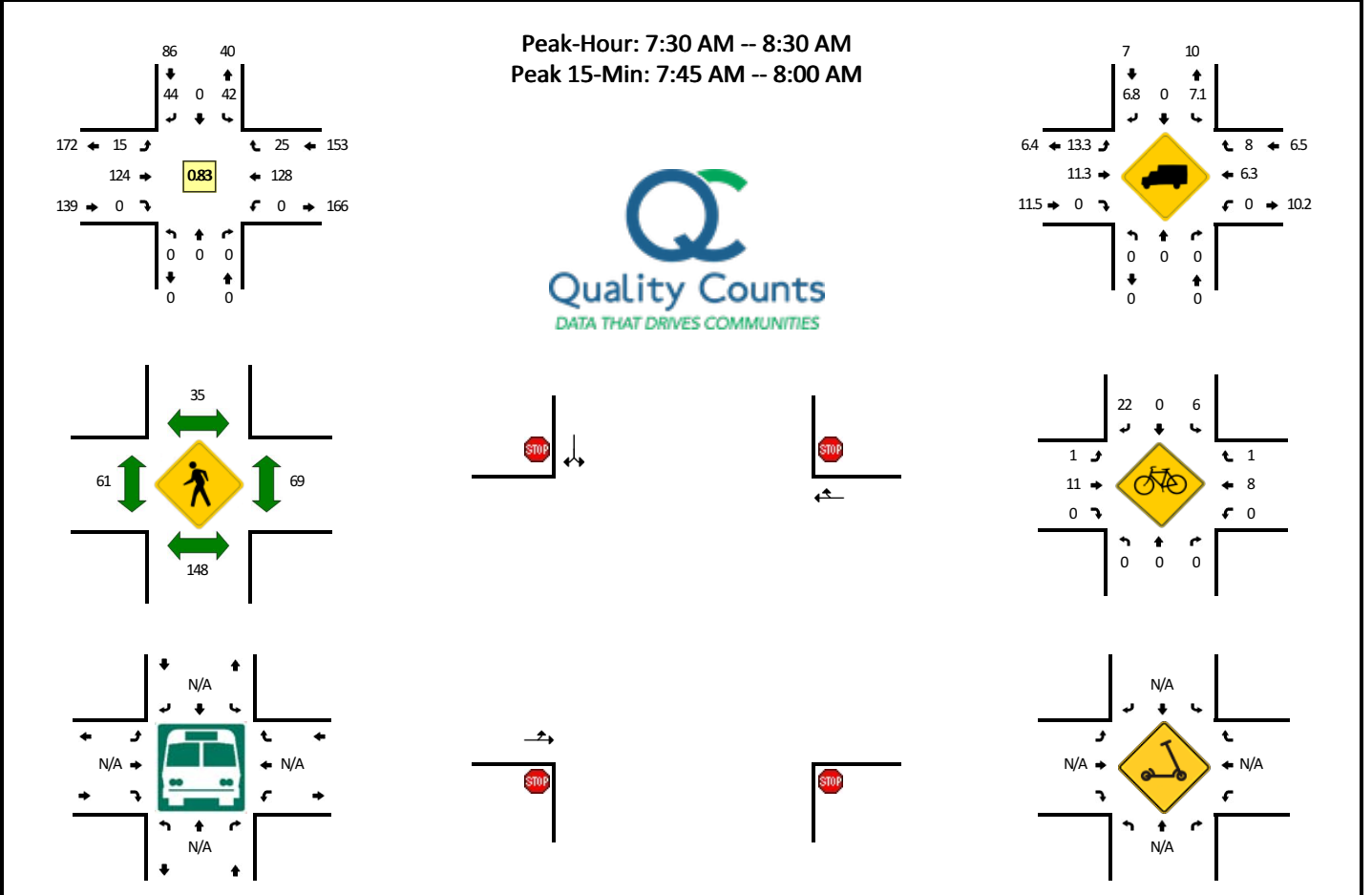
5-Min Count Period Beginning At	7 - NW 25th St/SW Park Terrace Pl (Northbound)				7 - NW 25th St/SW Park Terrace Pl (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	0	0	0	1	0	0	0	1	4	1	0	1	4	0	0	12	
7:35 AM	0	0	0	0	1	1	0	0	0	7	1	0	4	7	1	0	22	
7:40 AM	0	0	1	0	0	0	0	0	0	7	4	0	5	1	0	0	18	
7:45 AM	0	0	0	0	1	0	0	0	0	9	1	0	4	6	0	0	21	
7:50 AM	0	0	0	0	0	0	0	0	0	14	3	0	8	6	0	0	31	
7:55 AM	1	0	0	0	1	2	3	0	3	14	4	0	12	12	2	0	54	
8:00 AM	0	0	0	0	0	1	1	0	0	8	1	0	4	12	0	0	27	
8:05 AM	0	0	1	0	3	1	4	0	0	11	3	0	4	3	0	0	30	
8:10 AM	0	1	1	0	0	1	6	0	0	5	2	0	1	7	1	0	25	
8:15 AM	0	0	0	0	1	0	0	0	1	9	2	0	1	8	1	0	23	
8:20 AM	0	1	1	0	0	2	0	0	0	9	1	0	4	9	2	0	29	
8:25 AM	0	0	0	0	1	1	1	0	0	10	1	0	1	7	1	0	23	315

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	4	12	16	0	12	144	32	0	96	120	8	0	448
Heavy Trucks	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	0	12
Buses																	
Pedestrians		56				24				88				32			200
Bicycles	0	0	0		0	8	4		4	16	4		0	16	0		52
Scoters																	

Comments:

**LOCATION:** 8 - NW Kings Blvd -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543999  
**DATE:** Tue, Oct 26 2021

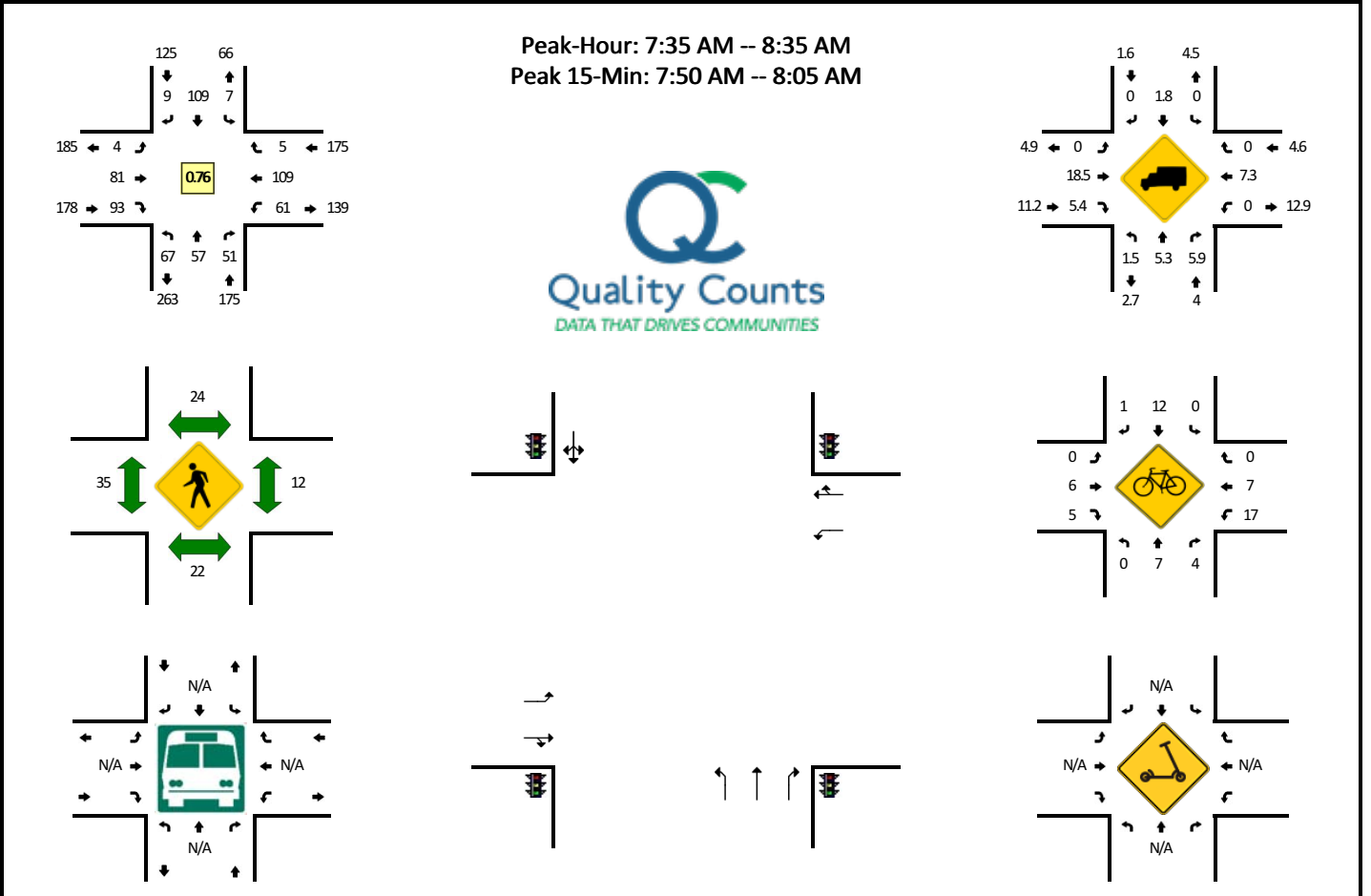


5-Min Count Period Beginning At	8 - NW Kings Blvd (Northbound)				8 - NW Kings Blvd (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	0	0	0	2	0	3	0	0	9	0	0	0	6	1	0	21	
7:35 AM	0	0	0	0	3	0	1	0	0	11	0	0	0	10	1	0	26	
7:40 AM	0	0	0	0	2	0	3	0	1	12	0	0	0	8	1	0	27	
7:45 AM	0	0	0	0	10	0	4	0	1	4	0	0	0	11	6	0	36	
7:50 AM	0	0	0	0	7	0	4	0	0	11	0	0	0	12	3	0	37	
7:55 AM	0	0	0	0	4	0	3	0	4	12	0	0	0	18	0	0	41	
8:00 AM	0	0	0	0	1	0	6	0	2	13	0	0	0	10	3	0	35	
8:05 AM	0	0	0	0	3	0	3	0	1	8	0	0	0	10	4	0	29	
8:10 AM	0	0	0	0	4	0	5	0	1	10	0	0	0	9	1	0	30	
8:15 AM	0	0	0	0	3	0	1	0	2	8	0	0	0	9	3	0	26	
8:20 AM	0	0	0	0	1	0	3	0	1	12	0	0	0	15	2	0	34	
8:25 AM	0	0	0	0	2	0	8	0	2	14	0	0	0	10	0	0	36	378
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	84	0	44	0	20	108	0	0	0	164	36	0	456	
Heavy Trucks Buses	0	0	0	0	4	0	0	0	4	4	0	0	0	12	4	0	28	
Pedestrians		216				60				100				64			440	
Bicycles	0	0	0		4	0	52		0	36	0		0	8	4		104	
Scoters																		

*Comments:*

**LOCATION:** 9 - NW 14th St -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543917  
**DATE:** Tue, Oct 19 2021

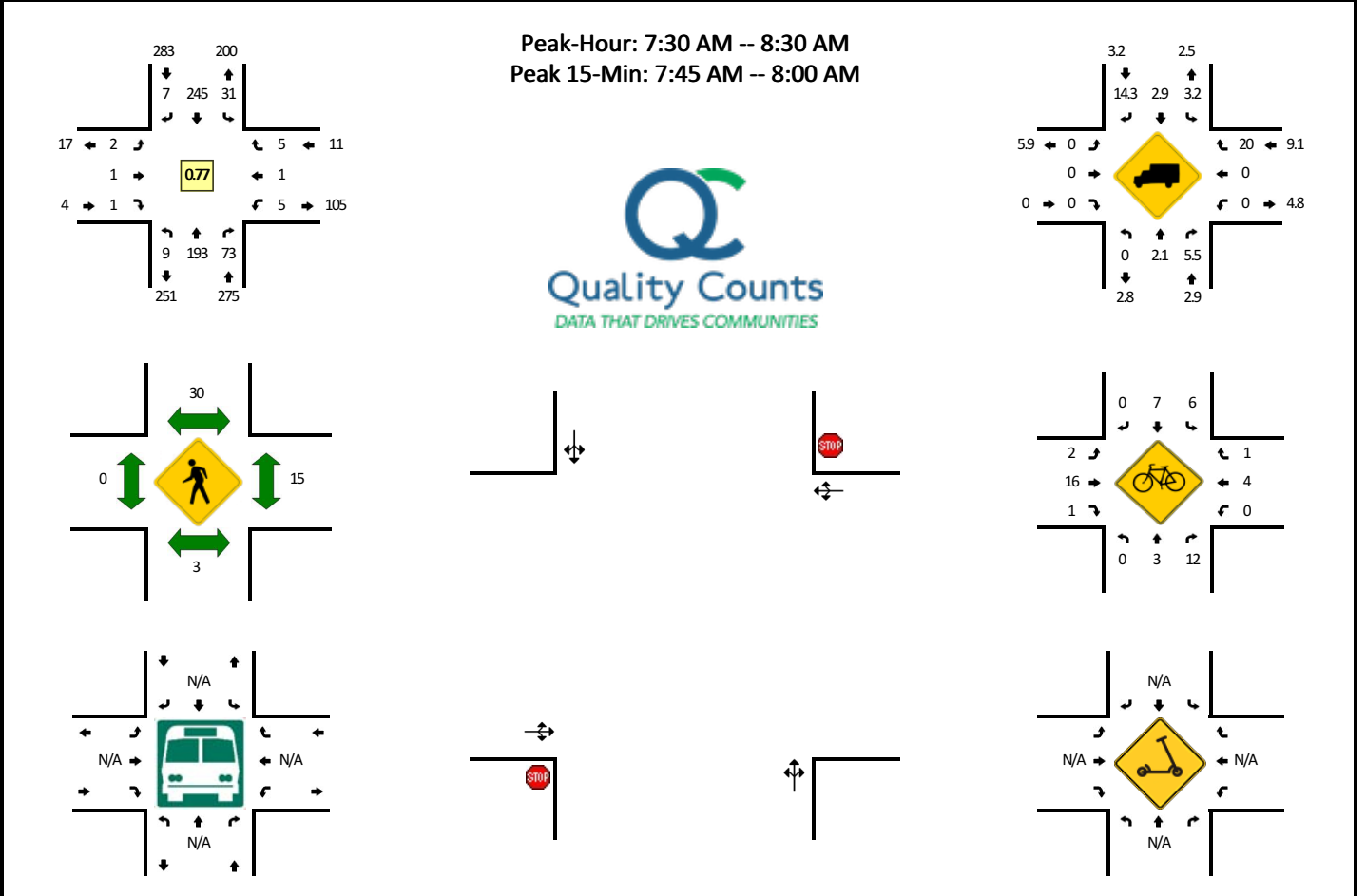


5-Min Count Period Beginning At	9 - NW 14th St (Northbound)				9 - NW 14th St (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
7:00 AM	2	0	1	0	0	3	0	0	0	1	3	0	0	1	4	0	0	15	
7:05 AM	1	4	6	0	0	1	0	0	0	1	2	6	0	1	2	0	0	24	
7:10 AM	2	2	0	0	0	1	0	0	0	1	1	0	0	1	2	0	0	10	
7:15 AM	2	3	2	0	0	2	0	0	0	0	4	3	0	3	6	0	0	25	
7:20 AM	2	1	0	0	0	1	1	0	0	1	2	4	0	2	0	0	0	14	
7:25 AM	4	3	3	0	0	4	0	0	0	1	1	2	0	1	7	0	0	26	
7:30 AM	2	7	4	0	1	7	0	0	0	0	2	6	0	6	7	0	0	42	
7:35 AM	4	9	3	0	1	3	0	0	0	0	4	5	0	2	6	0	0	37	
7:40 AM	9	6	4	0	0	12	2	0	0	0	10	5	0	7	6	1	0	62	
7:45 AM	7	4	6	0	0	9	0	0	0	0	5	9	0	6	9	0	0	55	
7:50 AM	5	7	5	0	0	12	1	0	0	0	9	13	0	7	9	1	0	69	
7:55 AM	9	6	5	0	1	16	2	0	0	1	6	9	0	7	21	1	0	84	463
8:00 AM	5	8	2	0	2	11	1	0	0	0	9	10	0	6	7	0	0	61	509
8:05 AM	2	5	4	0	0	4	0	0	0	0	10	6	0	2	8	0	0	41	526
8:10 AM	6	2	4	0	1	8	0	0	0	0	5	12	0	4	3	2	0	47	563
8:15 AM	6	1	9	0	0	6	2	0	0	1	4	7	0	5	8	0	0	49	587
8:20 AM	6	4	5	0	0	9	0	0	0	1	10	3	0	5	11	0	0	54	627
8:25 AM	6	3	2	0	1	12	0	0	0	1	4	9	0	6	10	0	0	54	655
8:30 AM	2	2	2	0	1	7	1	0	0	0	5	5	0	4	11	0	0	40	653
8:35 AM	2	6	2	0	0	5	3	0	0	1	14	9	0	4	7	0	0	53	669
8:40 AM	8	4	5	0	0	4	0	0	0	0	11	13	0	6	8	0	0	59	666
8:45 AM	8	3	3	0	0	3	0	0	0	1	7	12	0	6	6	0	0	49	660
8:50 AM	3	4	5	0	0	4	0	0	0	0	9	5	0	11	9	0	0	50	641
8:55 AM	3	5	4	0	0	7	0	0	0	0	11	8	0	5	8	0	0	51	608
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	76	84	48	0	12	156	16	0	4	96	128	0	80	148	8	0	856		
Heavy Trucks	4	8	4		0	4	0		0	4	4		0	12	0	40			
Buses																			
Pedestrians		16				32				56				12		116			
Bicycles	0	12	8		0	24	0		0	4	8		16	8	0	80			
Scoters																			

*Comments:*

**LOCATION:** 10 - SW 35th St -- SW Campus Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439101  
**DATE:** Tue, Oct 19 2021

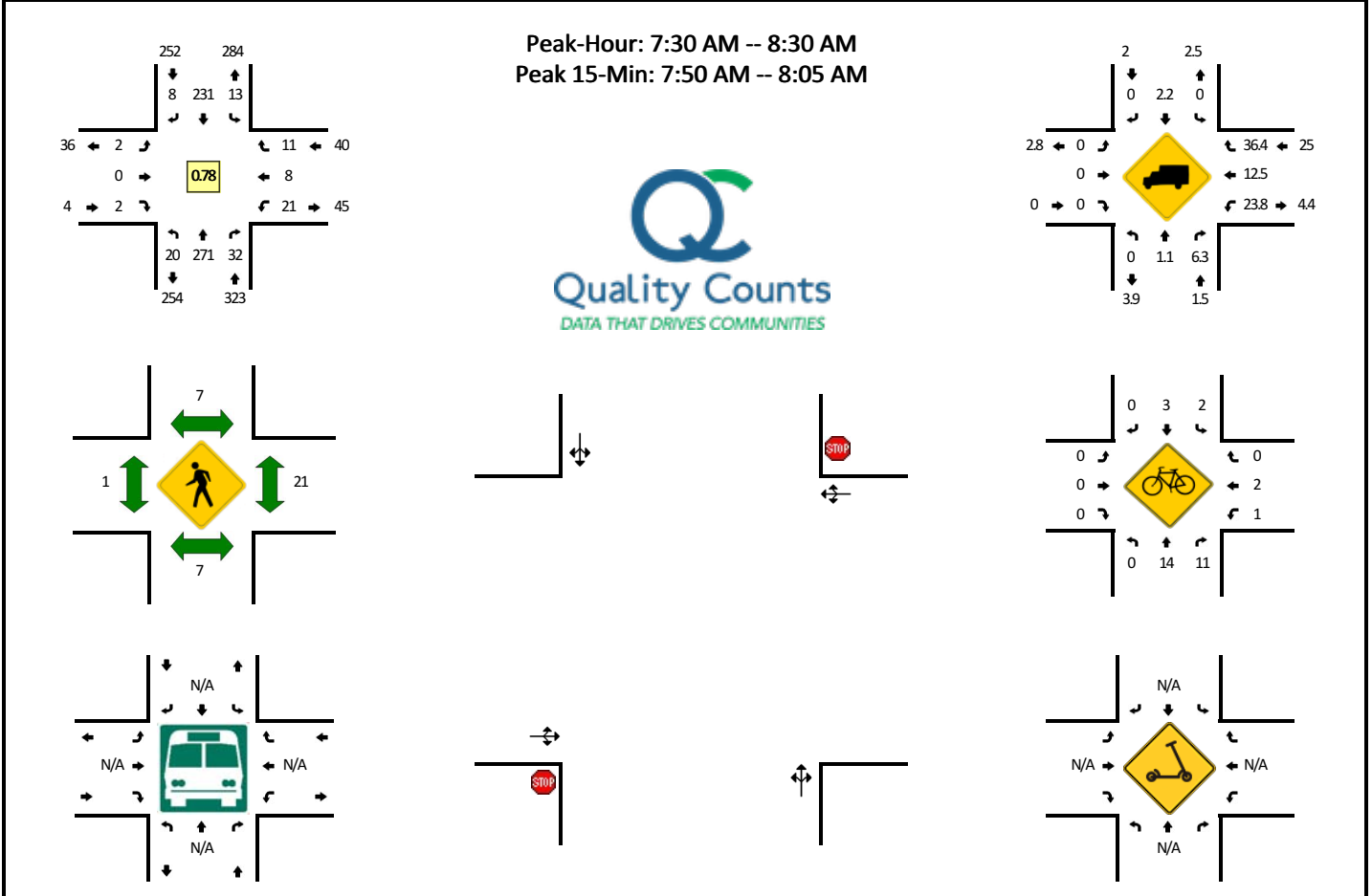


5-Min Count Period Beginning At	10 - SW 35th St (Northbound)				10 - SW 35th St (Southbound)				SW Campus Way (Eastbound)				SW Campus Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	13	6	0	2	20	0	0	0	0	0	0	1	0	0	0	42	
7:35 AM	2	15	10	0	1	13	2	0	0	0	1	0	1	0	0	0	45	
7:40 AM	0	12	4	0	3	16	2	0	0	0	0	0	1	0	0	0	38	
7:45 AM	1	21	4	0	1	23	0	0	0	0	0	0	1	0	0	0	51	
7:50 AM	1	25	9	0	3	22	0	0	0	1	0	0	0	0	0	0	61	
7:55 AM	3	28	9	0	3	28	2	0	0	0	0	0	0	0	2	0	75	
8:00 AM	1	12	8	0	3	26	0	0	0	0	0	0	0	0	1	0	51	
8:05 AM	0	16	8	0	2	18	0	0	0	0	0	0	0	0	0	0	44	
8:10 AM	0	16	7	0	3	20	0	0	0	0	0	0	0	0	1	0	47	
8:15 AM	0	13	3	0	6	19	0	0	1	0	0	0	1	0	0	0	43	
8:20 AM	0	11	2	0	1	19	0	0	0	0	0	0	0	1	1	0	35	
8:25 AM	1	11	3	0	3	21	1	0	1	0	0	0	0	0	0	0	41	573
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	296	88	0	28	292	8	0	0	4	0	0	4	0	8	0	748	
Heavy Trucks	0	16	4	0	4	12	0	0	0	0	0	0	0	0	0	0	36	
Buses																		
Pedestrians		8				52				0				20			80	
Bicycles	0	8	20		4	12	0		0	12	0		0	12	4		72	
Scoters																		

Comments:

**LOCATION:** 11 - SW 35th St -- SW Jefferson Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439103  
**DATE:** Tue, Oct 19 2021



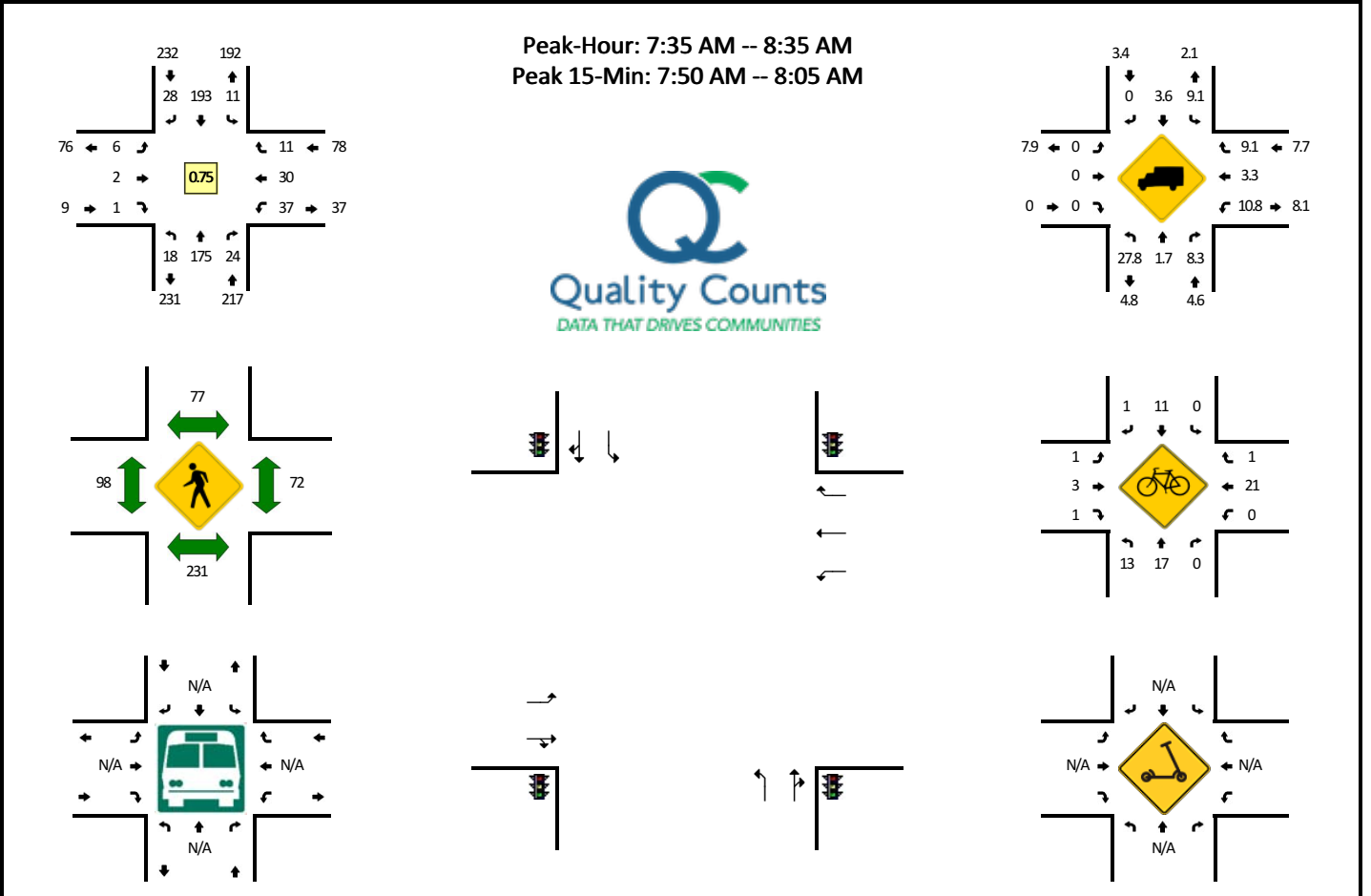
5-Min Count Period Beginning At	11 - SW 35th St (Northbound)				11 - SW 35th St (Southbound)				SW Jefferson Way (Eastbound)				SW Jefferson Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	2	20	0	0	1	17	1	0	1	0	0	0	0	0	0	0	42	
7:35 AM	0	25	3	0	1	18	0	0	0	0	0	0	1	0	1	0	49	
7:40 AM	3	16	3	0	0	15	1	0	0	0	0	0	2	0	1	0	41	
7:45 AM	0	28	3	0	1	22	1	0	0	0	0	0	3	0	0	0	58	
7:50 AM	0	41	3	0	1	18	1	0	0	0	0	0	2	0	0	0	66	
7:55 AM	0	33	3	0	1	24	1	0	0	0	0	0	1	0	3	0	66	
8:00 AM	0	23	4	0	5	25	0	0	1	0	0	0	4	3	1	0	66	
8:05 AM	5	24	4	0	0	17	0	0	0	0	0	0	1	0	1	0	52	
8:10 AM	4	23	2	0	0	19	2	0	0	0	0	0	2	2	1	0	55	
8:15 AM	2	17	4	0	1	19	0	0	0	0	0	0	1	2	0	0	46	
8:20 AM	3	10	1	0	1	18	0	0	0	0	0	1	1	1	0	0	36	
8:25 AM	1	11	2	0	1	19	1	0	0	0	1	0	3	0	3	0	42	619
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	388	40	0	28	268	8	0	4	0	0	0	28	12	16	0	792	
Heavy Trucks	0	4	0	0	0	12	0	0	0	0	0	0	4	0	4	0	24	
Buses																		
Pedestrians		16				8				4				16			44	
Bicycles	0	24	8		4	4	0		0	0	0		0	0	0		40	
Scooters																		

*Comments:*



**LOCATION:** 12 - SW 14th St/SW 15th St -- SW Jefferson Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543953  
**DATE:** Tue, Oct 19 2021

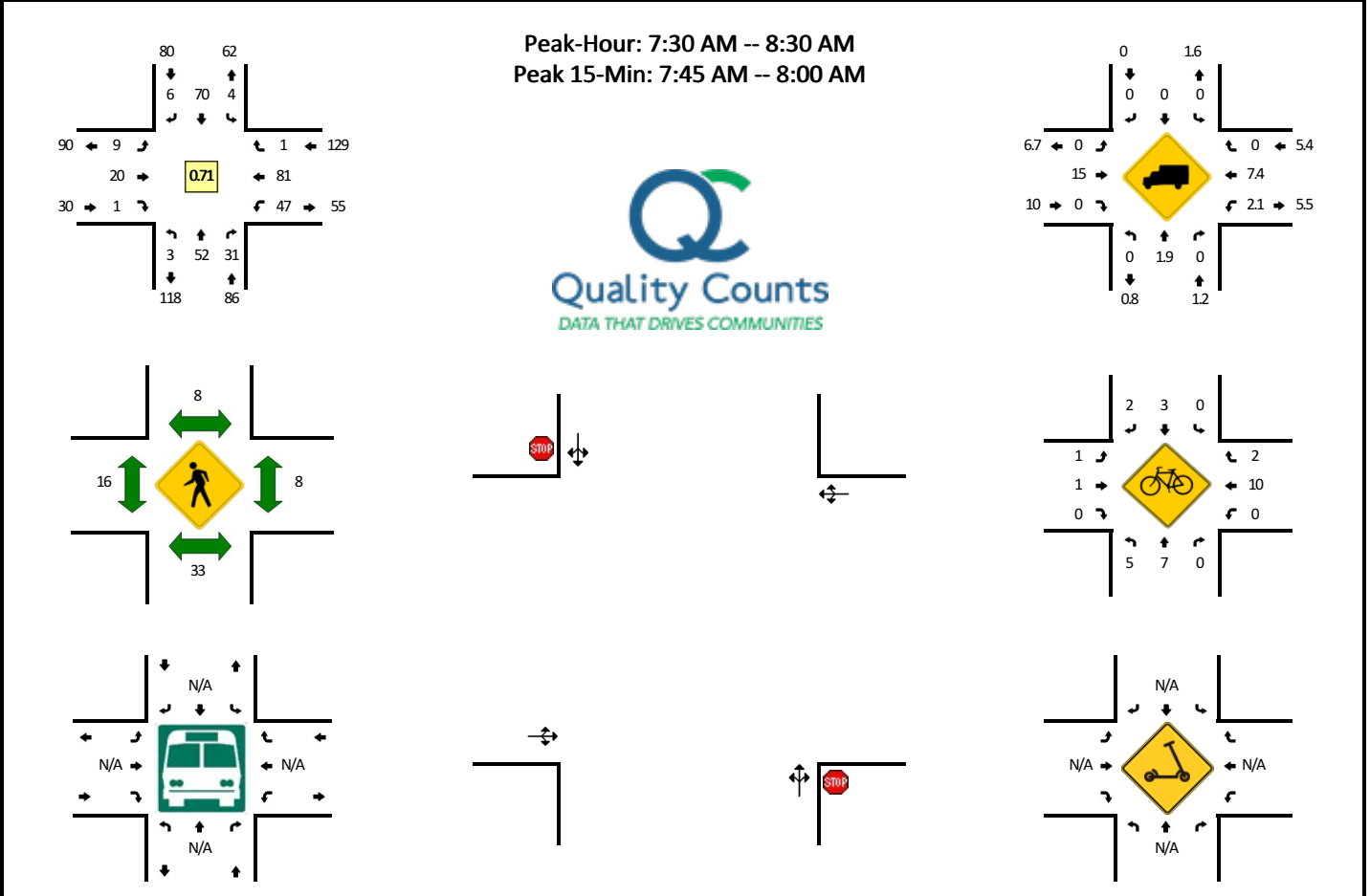


5-Min Count Period Beginning At	12 - SW 14th St/SW 15th St (Northbound)				12 - SW 14th St/SW 15th St (Southbound)				SW Jefferson Way (Eastbound)				SW Jefferson Way (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
7:00 AM	3	3	1	0	1	4	0	0	0	0	0	0	0	3	1	0	0	16	
7:05 AM	0	8	2	0	0	7	1	0	0	3	2	0	0	2	0	0	0	25	
7:10 AM	1	4	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	9	
7:15 AM	0	7	0	0	0	9	0	0	0	0	0	0	0	2	1	0	0	19	
7:20 AM	2	3	0	0	0	5	2	0	0	0	0	0	0	4	0	0	0	16	
7:25 AM	0	11	1	0	1	5	3	0	0	1	0	0	0	2	2	0	0	26	
7:30 AM	1	8	4	0	0	9	0	0	0	6	2	0	0	5	4	0	0	39	
7:35 AM	0	15	1	0	2	8	1	0	0	0	0	0	0	1	2	0	0	30	
7:40 AM	2	17	2	0	0	14	3	0	0	0	0	0	0	1	1	1	0	41	
7:45 AM	1	17	2	0	2	17	4	0	0	0	0	0	0	7	5	2	0	57	
7:50 AM	1	19	2	0	1	21	5	0	0	0	0	0	0	2	5	0	0	56	
7:55 AM	4	19	1	0	1	20	4	0	0	0	0	0	0	5	2	2	0	58	392
8:00 AM	0	17	4	0	2	30	2	0	0	1	0	0	0	6	2	0	0	64	440
8:05 AM	1	12	4	0	0	4	1	0	0	1	0	1	0	2	2	0	0	28	443
8:10 AM	0	17	3	0	0	18	2	0	0	0	1	0	0	4	2	4	0	51	485
8:15 AM	2	15	1	0	0	11	2	0	0	1	0	0	0	3	1	1	0	37	503
8:20 AM	1	12	1	0	1	12	1	0	0	2	0	0	0	1	2	1	0	34	521
8:25 AM	4	9	3	0	1	22	2	0	0	1	0	0	0	3	3	0	0	48	543
8:30 AM	2	6	0	0	1	16	1	0	0	0	1	0	0	2	3	0	0	32	536
8:35 AM	2	7	0	0	0	15	2	0	0	0	0	0	0	2	1	3	0	32	538
8:40 AM	1	19	1	0	0	16	3	0	0	0	0	0	0	4	3	0	0	47	544
8:45 AM	2	12	1	0	1	20	0	0	0	0	0	0	0	3	1	0	0	40	527
8:50 AM	3	13	3	0	0	17	2	0	0	1	0	0	0	2	4	1	0	46	517
8:55 AM	0	16	2	0	1	17	2	0	0	0	1	1	0	6	1	0	0	47	506
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	20	220	28	0	16	284	44	0	4	0	0	0	52	36	8	0	712		
Heavy Trucks	4	12	0		4	4	0		0	0	0		8	0	0		32		
Buses																			
Pedestrians		136				88				92				72			388		
Bicycles	12	36	0		0	20	0		0	0	0		0	32	0		100		
Scoters																			

*Comments:*

**LOCATION:** 13 - SW 11th St -- SW Jefferson Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439105  
**DATE:** Tue, Oct 19 2021

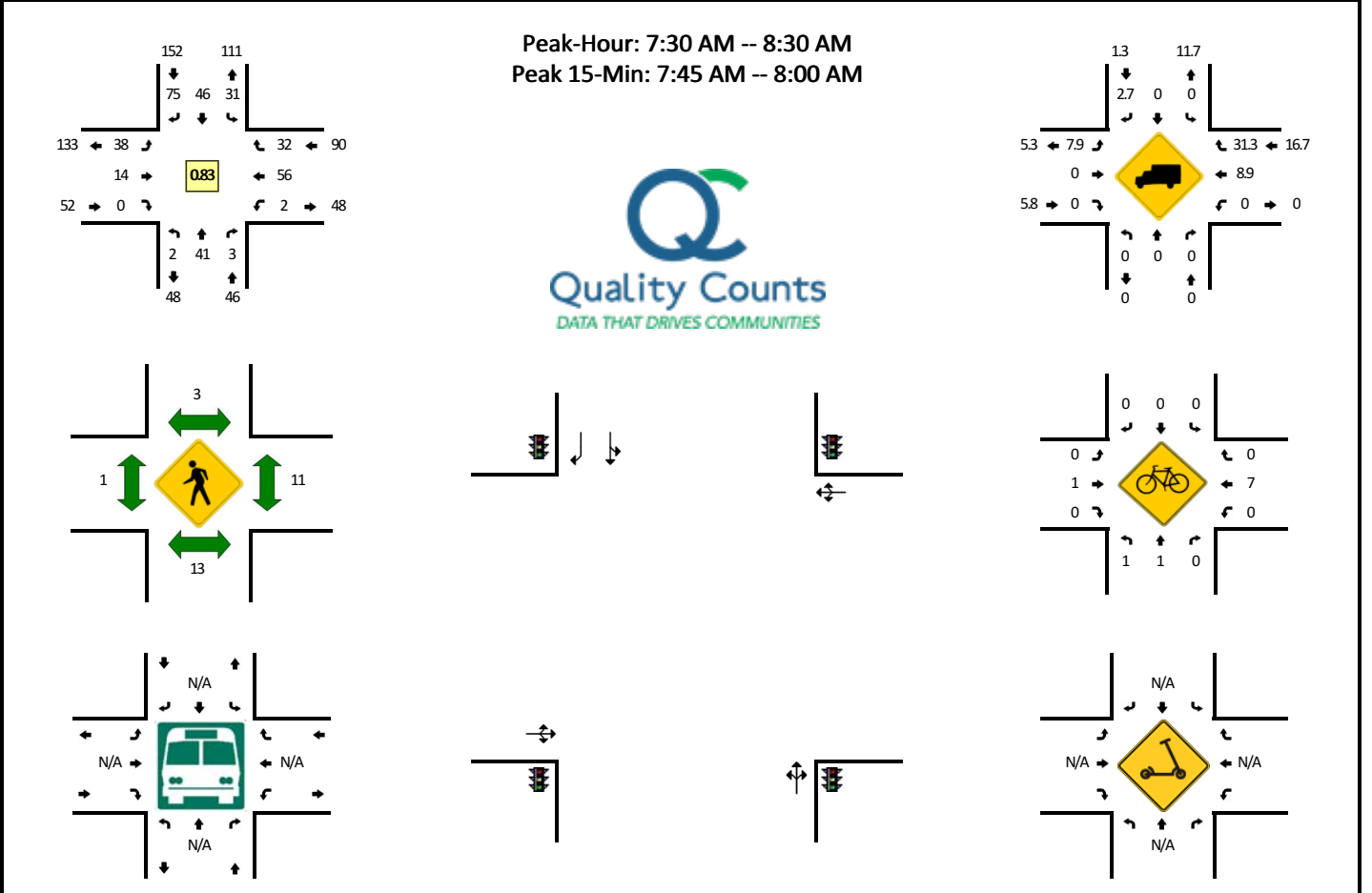


5-Min Count Period Beginning At	13 - SW 11th St (Northbound)				13 - SW 11th St (Southbound)				SW Jefferson Ave (Eastbound)				SW Jefferson Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	3	2	0	1	3	0	0	3	3	0	0	5	9	0	0	29	
7:35 AM	0	2	1	0	1	8	0	0	1	1	0	0	6	4	0	0	24	
7:40 AM	0	5	3	0	0	2	2	0	0	1	0	0	3	3	1	0	20	
7:45 AM	1	7	3	0	0	4	1	0	1	1	1	0	3	16	0	0	38	
7:50 AM	0	9	3	0	0	6	1	0	1	2	0	0	3	11	0	0	36	
7:55 AM	0	5	4	0	2	14	0	0	1	2	0	0	4	9	0	0	41	
8:00 AM	0	3	1	0	0	8	0	0	1	2	0	0	2	7	0	0	24	
8:05 AM	0	5	2	0	0	7	0	0	1	4	0	0	2	4	0	0	25	
8:10 AM	0	3	2	0	0	5	1	0	0	2	0	0	6	6	0	0	25	
8:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	4	5	0	0	15	
8:20 AM	2	3	3	0	0	5	1	0	0	1	0	0	4	2	0	0	21	
8:25 AM	0	4	7	0	0	5	0	0	0	1	0	0	5	5	0	0	27	325
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	84	40	0	8	96	8	0	12	20	4	0	40	144	0	0	460	
Heavy Trucks	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	8	
Buses																		
Pedestrians		40				8				36				8			92	
Bicycles	12	20	0		0	8	0		0	0	0		0	8	4		52	
Scooters																		

Comments:

**LOCATION:** 14 - SW 9th St -- SW Jefferson Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439107  
**DATE:** Tue, Oct 19 2021

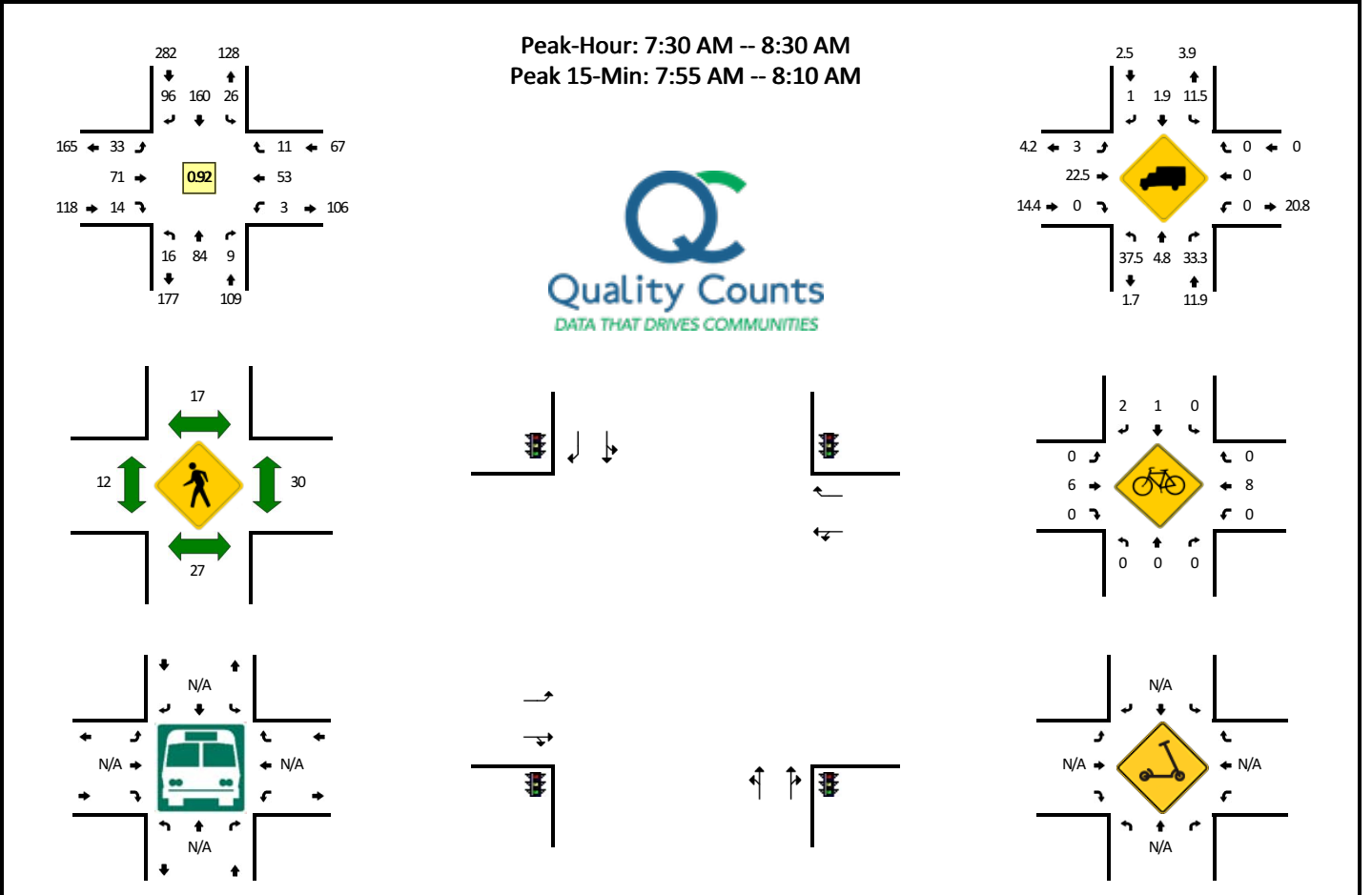


5-Min Count Period Beginning At	14 - SW 9th St (Northbound)				14 - SW 9th St (Southbound)				SW Jefferson Ave (Eastbound)				SW Jefferson Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	7	0	0	1	1	10	0	5	1	0	0	0	2	1	0	29	
7:35 AM	0	5	0	0	1	3	6	0	2	1	0	0	0	2	0	0	20	
7:40 AM	0	3	0	0	1	6	5	0	4	0	0	0	0	4	1	0	24	
7:45 AM	0	7	0	0	2	4	12	0	4	0	0	0	0	6	10	0	45	
7:50 AM	0	3	0	0	2	3	6	0	4	1	0	0	0	7	3	0	29	
7:55 AM	0	2	1	0	2	3	5	0	3	3	0	0	0	7	3	0	29	
8:00 AM	0	2	0	0	7	4	5	0	2	2	0	0	0	4	3	0	29	
8:05 AM	0	1	0	0	6	9	7	0	4	3	0	0	1	4	2	0	37	
8:10 AM	0	2	0	0	2	4	2	0	1	1	0	0	1	5	3	0	21	
8:15 AM	1	1	2	0	1	3	5	0	1	0	0	0	0	6	5	0	25	
8:20 AM	0	3	0	0	3	3	3	0	2	2	0	0	0	4	0	0	20	
8:25 AM	0	5	0	0	3	3	9	0	6	0	0	0	0	5	1	0	32	340
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	48	4	0	24	40	92	0	44	16	0	0	0	80	64	0	412	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	24	0	28	
Buses																		
Pedestrians		12				4				0				8			24	
Bicycles	0	0	0		0	0	0		0	0	0		0	8	0		8	
Scooters																		

*Comments:*

**LOCATION:** 15 - SW 9th St -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439109  
**DATE:** Tue, Oct 19 2021

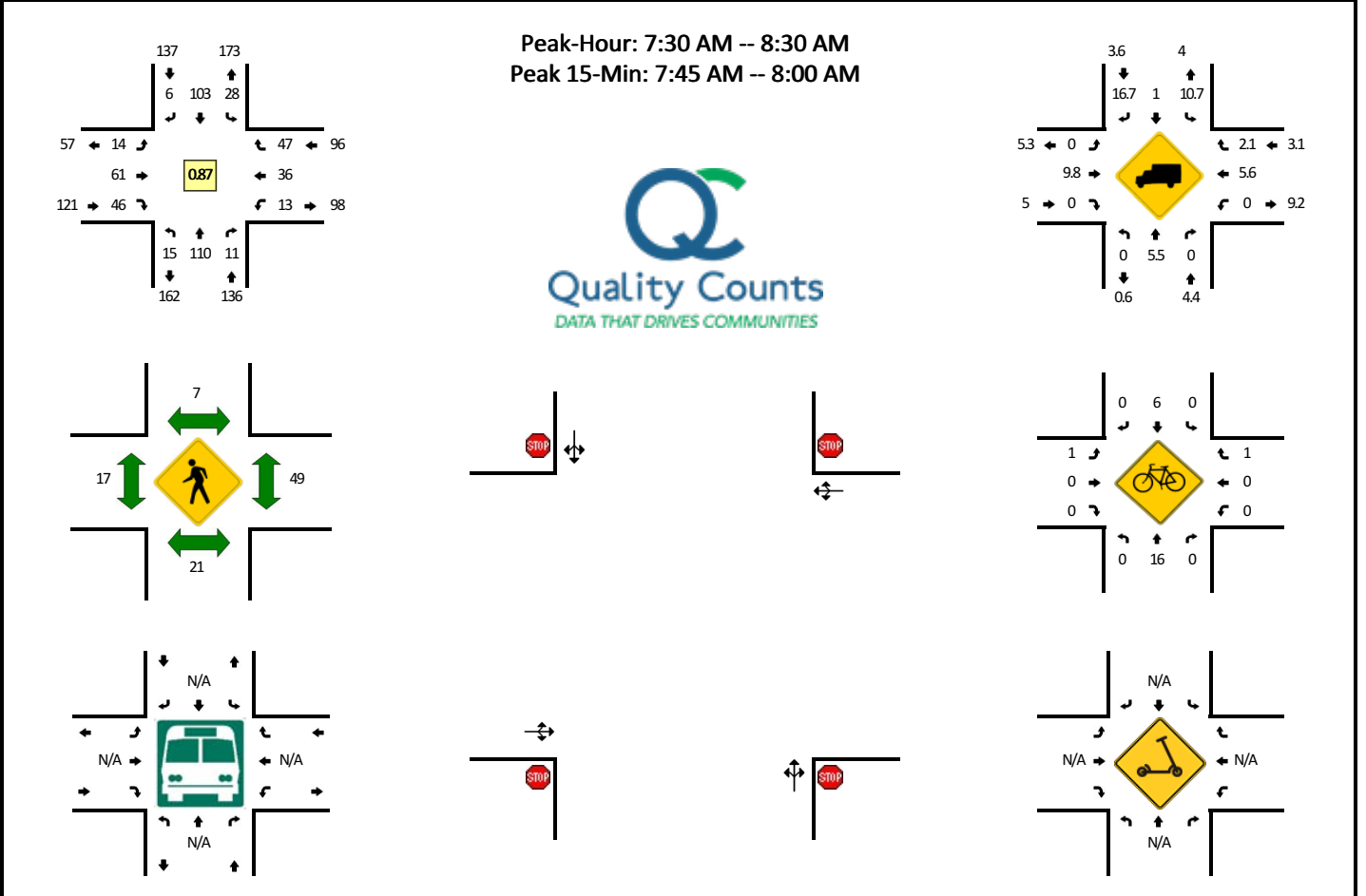


5-Min Count Period Beginning At	15 - SW 9th St (Northbound)				15 - SW 9th St (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	10	0	0	0	11	10	0	1	1	1	0	0	5	1	0	41	
7:35 AM	0	6	1	0	1	9	10	0	5	4	0	0	1	1	0	0	38	
7:40 AM	0	6	1	0	2	12	10	0	2	8	2	0	0	5	0	0	48	
7:45 AM	5	12	0	0	2	18	9	0	3	3	1	0	0	2	3	0	58	
7:50 AM	1	9	0	0	2	13	6	0	6	4	1	0	0	4	1	0	47	
7:55 AM	1	6	1	0	0	9	12	0	2	8	2	0	0	7	0	0	48	
8:00 AM	2	4	2	0	2	11	11	0	3	6	2	0	1	4	0	0	48	
8:05 AM	1	4	1	0	3	26	4	0	4	9	2	0	0	4	2	0	60	
8:10 AM	1	8	0	0	2	10	3	0	2	6	1	0	0	3	1	0	37	
8:15 AM	2	5	0	0	5	11	12	0	1	6	1	0	0	4	2	0	49	
8:20 AM	0	4	0	0	4	13	4	0	3	12	0	0	0	6	0	0	46	
8:25 AM	2	10	3	0	3	17	5	0	1	4	1	0	1	8	1	0	56	576
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	56	16	0	20	184	108	0	36	92	24	0	4	60	8	0	624	
Heavy Trucks	8	0	4		4	0	0		0	8	0		0	0	0		24	
Buses																		
Pedestrians		24				8				0				36			68	
Bicycles	0	0	0		0	4	0		0	16	0		0	8	0		28	
Scoters																		

*Comments:*

**LOCATION:** 16 - SW 30th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439111  
**DATE:** Tue, Oct 19 2021

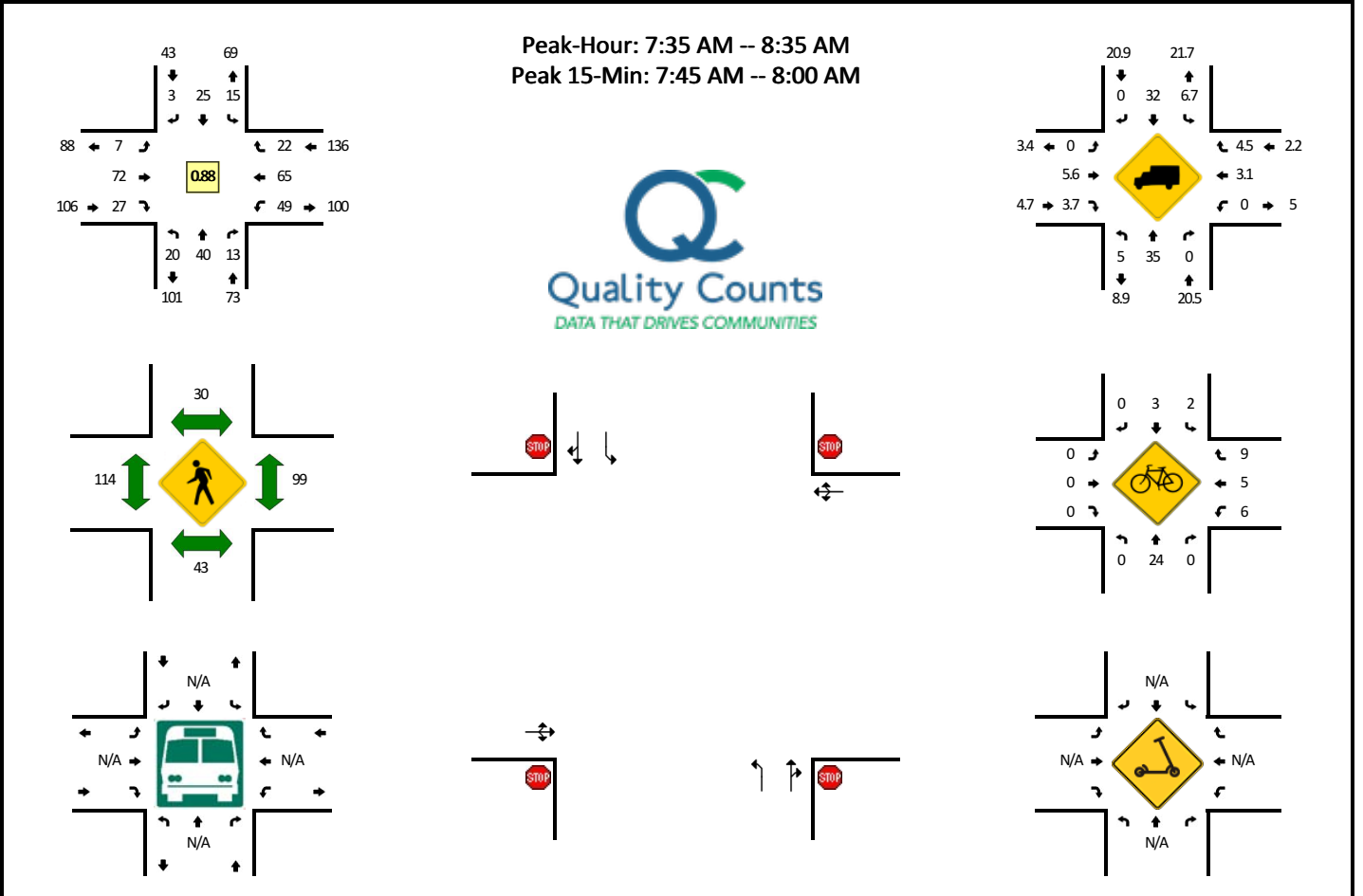


5-Min Count Period Beginning At	16 - SW 30th St (Northbound)				16 - SW 30th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	6	0	0	1	10	0	0	3	1	5	0	6	5	7	0	45	
7:35 AM	0	10	1	0	2	7	0	0	0	8	6	0	0	3	3	0	40	
7:40 AM	1	5	1	0	1	13	1	0	4	1	2	0	1	1	5	0	36	
7:45 AM	2	12	1	0	3	11	0	1	1	6	6	0	2	2	9	0	56	
7:50 AM	2	11	1	0	1	14	1	0	0	5	5	0	1	2	1	0	44	
7:55 AM	0	13	0	0	4	6	1	0	1	6	4	0	1	4	1	0	41	
8:00 AM	1	6	1	0	5	10	1	0	1	4	5	0	0	5	2	0	41	
8:05 AM	2	9	0	0	1	8	0	0	1	5	5	0	1	2	1	0	35	
8:10 AM	1	9	3	0	2	8	1	0	0	9	3	0	0	4	4	0	44	
8:15 AM	2	10	1	0	1	4	0	1	0	5	2	0	1	2	5	0	34	
8:20 AM	1	10	1	0	3	6	1	0	3	4	2	0	0	2	7	0	40	
8:25 AM	2	9	1	0	2	6	0	0	0	7	1	0	0	4	2	0	34	490
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	144	8	0	32	124	8	4	8	68	60	0	16	32	44	0	564	
Heavy Trucks Buses	0	4	0	0	0	0	0	0	0	4	0	0	0	0	4	0	12	
Pedestrians		32				12				16				80			140	
Bicycles	0	28	0		0	8	0		0	0	0		0	0	0		36	
Scooters																		

Comments:

**LOCATION:** 17 - SW 26th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543931  
**DATE:** Tue, Oct 19 2021

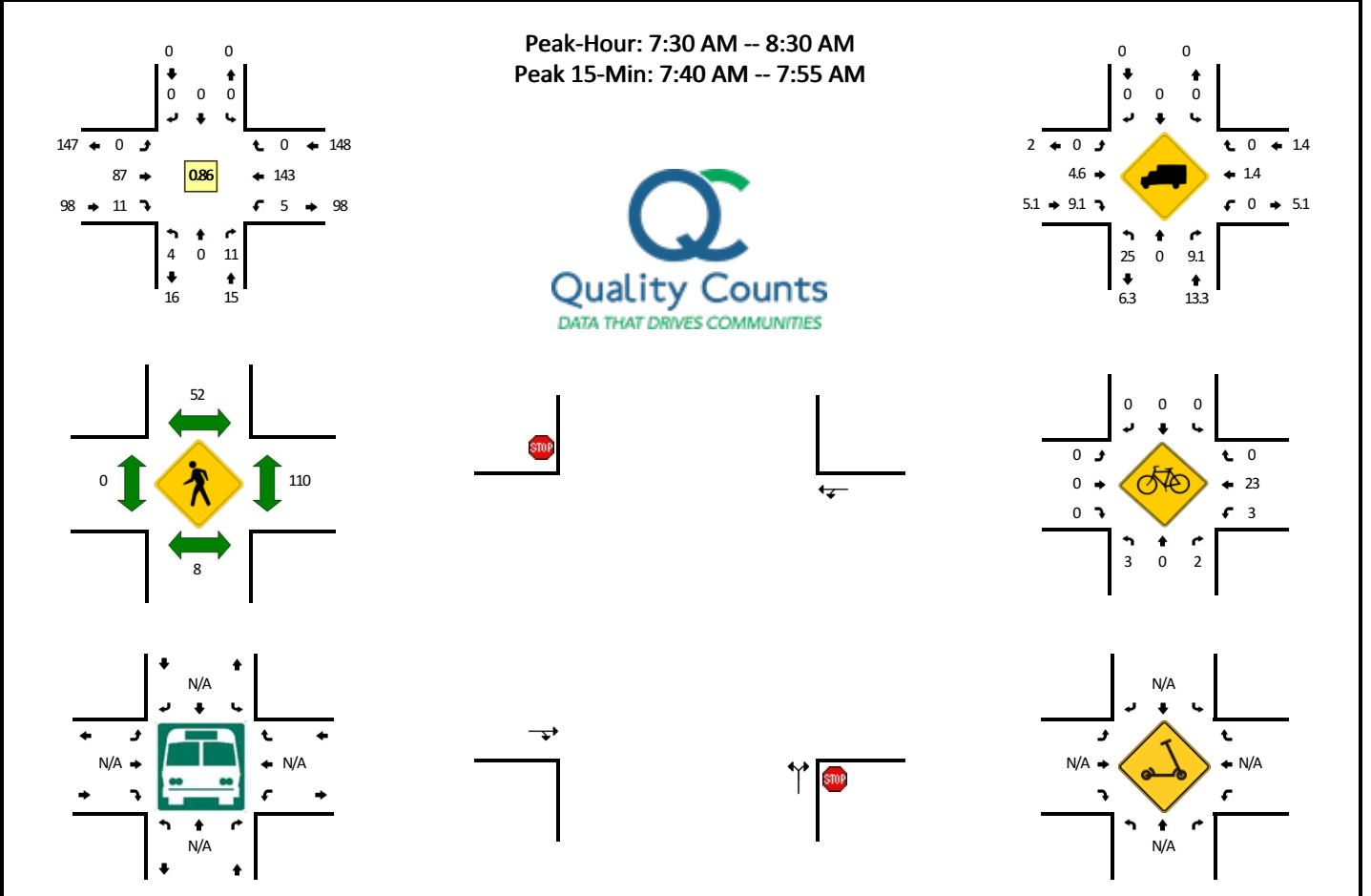


5-Min Count Period Beginning At	17 - SW 26th St (Northbound)				17 - SW 26th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	3	1	0	0	1	2	0	0	1	0	0	0	0	0	0	9	
7:05 AM	0	0	0	0	1	1	1	0	0	0	2	0	0	2	0	2	9	
7:10 AM	0	4	0	0	2	3	0	0	1	0	1	0	0	3	3	3	17	
7:15 AM	2	2	0	0	0	1	1	0	0	0	1	0	0	3	0	1	11	
7:20 AM	0	1	1	0	0	2	1	0	2	3	3	0	0	5	1	0	19	
7:25 AM	1	3	1	0	0	0	1	0	0	3	2	0	2	3	0	0	16	
7:30 AM	3	1	0	0	0	2	2	0	0	3	0	0	3	10	5	0	29	
7:35 AM	1	3	0	0	0	0	0	0	2	6	4	0	3	6	1	0	26	
7:40 AM	1	3	2	0	1	0	0	0	0	2	2	0	5	7	2	0	25	
7:45 AM	4	2	1	0	2	4	0	0	1	4	3	0	7	9	6	0	43	
7:50 AM	0	6	2	0	1	2	0	0	0	7	0	0	5	4	1	0	28	
7:55 AM	1	2	1	0	2	6	0	0	0	8	1	0	4	4	2	0	31	263
8:00 AM	0	5	1	0	2	4	0	0	0	8	5	0	7	6	1	0	39	293
8:05 AM	2	4	0	0	0	0	0	0	0	8	0	0	6	4	3	0	27	311
8:10 AM	3	1	1	0	2	0	2	0	0	6	2	0	1	3	1	0	22	316
8:15 AM	3	5	2	0	2	3	0	0	3	4	1	0	2	7	1	0	33	338
8:20 AM	1	4	1	0	1	0	1	0	1	4	4	0	2	9	1	0	29	348
8:25 AM	2	3	1	0	1	3	0	0	0	9	1	0	2	3	0	0	25	357
8:30 AM	2	2	1	0	1	3	0	0	0	6	4	0	5	3	3	0	30	358
8:35 AM	2	8	1	0	2	2	0	0	1	3	3	0	1	9	2	0	34	366
8:40 AM	3	1	5	0	2	4	0	0	1	6	6	0	2	6	0	0	36	377
8:45 AM	1	3	2	0	2	2	1	0	1	3	2	0	8	5	3	0	33	367
8:50 AM	1	3	1	0	1	1	0	0	0	7	1	0	2	5	1	0	23	362
8:55 AM	0	1	0	0	3	3	0	0	1	5	0	0	5	9	2	0	29	360
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	40	16	0	20	48	0	0	4	76	16	0	64	68	36	0	408	
Heavy Trucks	0	8	0		0	12	0		0	4	0		0	0	4		28	
Buses																		
Pedestrians		40				36				152				124			352	
Bicycles	0	28	0		4	4	0		0	0	0		8	4	12		60	
Scoters																		

*Comments:*

**LOCATION:** 18 - SW 17th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439113  
**DATE:** Tue, Oct 19 2021

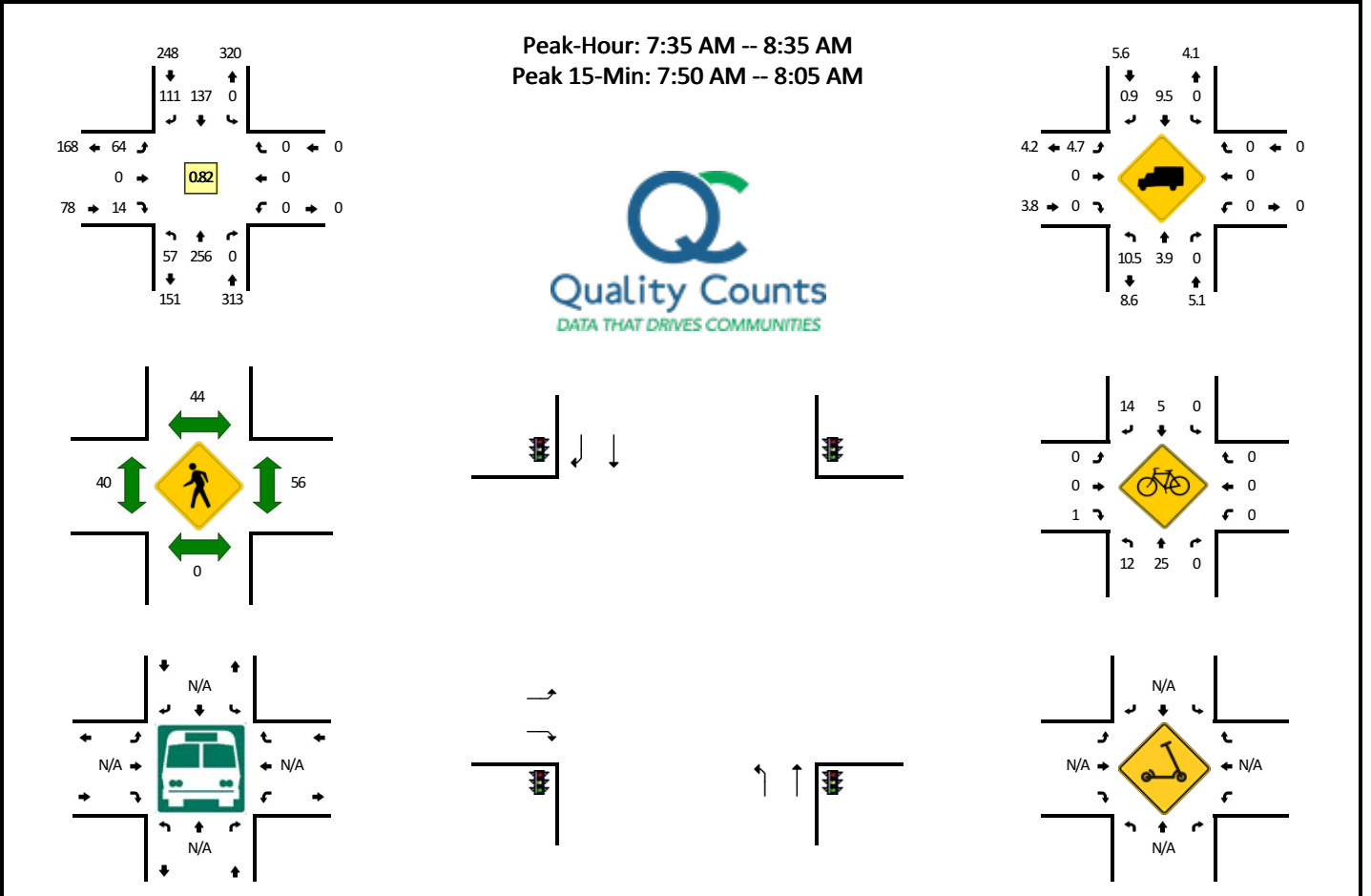


5-Min Count Period Beginning At	18 - SW 17th St (Northbound)				18 - SW 17th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	0	1	0	0	0	0	0	0	4	0	0	0	18	0	0	24	
7:35 AM	1	0	1	0	0	0	0	0	0	6	1	0	0	9	0	0	18	
7:40 AM	1	0	1	0	0	0	0	0	0	6	0	0	0	15	0	0	23	
7:45 AM	0	0	1	0	0	0	0	0	0	5	1	0	0	23	0	0	30	
7:50 AM	0	0	2	0	0	0	0	0	0	9	1	0	0	11	0	0	23	
7:55 AM	0	0	0	0	0	0	0	0	0	9	2	0	1	8	0	0	20	
8:00 AM	0	0	0	0	0	0	0	0	0	10	1	0	2	14	0	0	27	
8:05 AM	0	0	2	0	0	0	0	0	0	6	3	0	1	10	0	0	22	
8:10 AM	0	0	0	0	0	0	0	0	0	8	1	0	0	6	0	0	15	
8:15 AM	0	0	0	0	0	0	0	0	0	7	1	0	1	12	0	0	21	
8:20 AM	1	0	3	0	0	0	0	0	0	6	0	0	0	8	0	0	18	
8:25 AM	0	0	0	0	0	0	0	0	0	11	0	0	0	9	0	0	20	261
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	16	0	0	0	0	0	0	80	8	0	0	196	0	0	304	
Heavy Trucks	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	0	12	
Buses																		
Pedestrians		12				36				0				84			132	
Bicycles	0	0	0		0	0	0		0	0	0		0	20	0		20	
Scooters																		

Comments:

**LOCATION:** 19 - SW 15th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543935  
**DATE:** Tue, Oct 19 2021



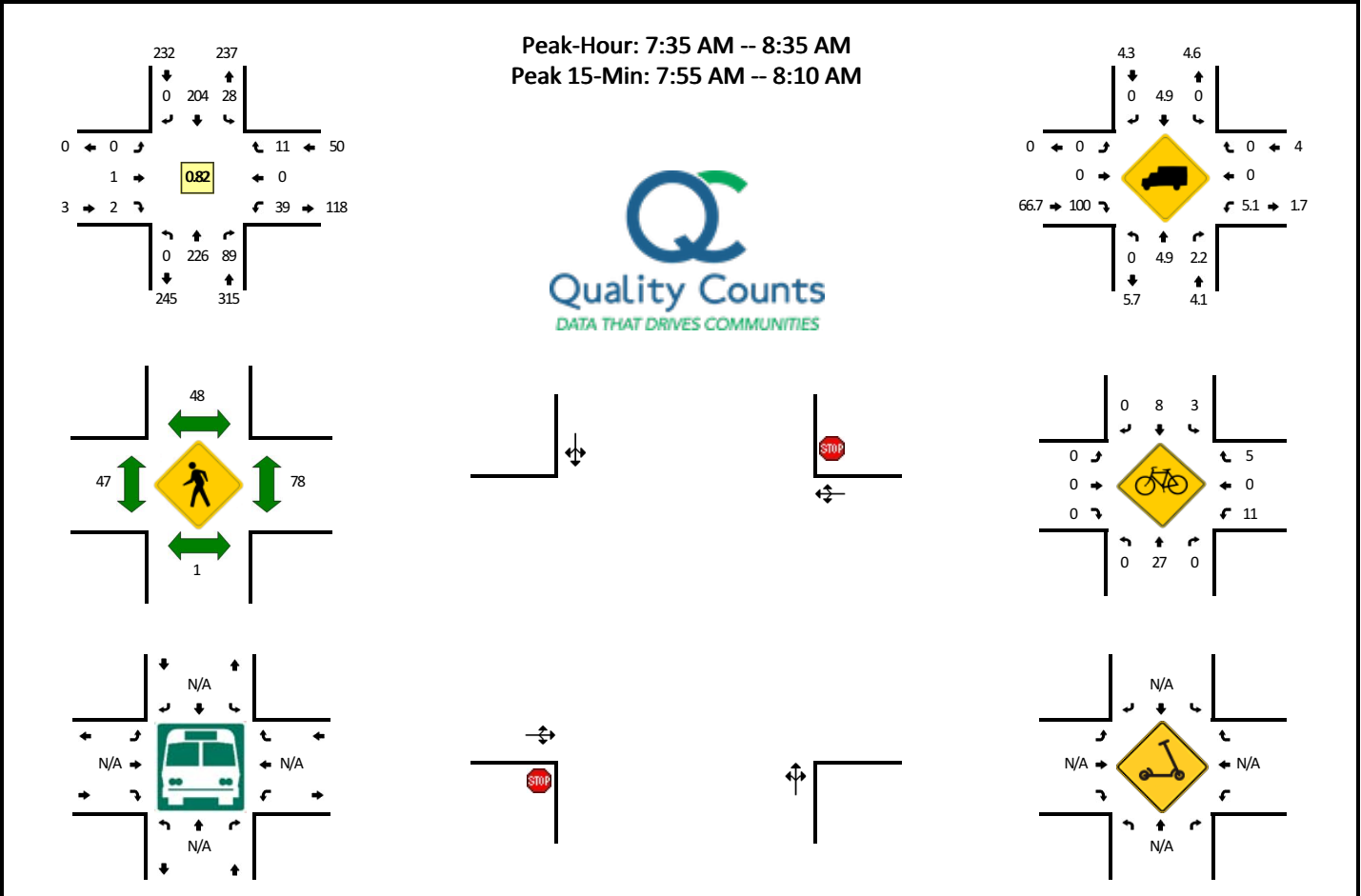
5-Min Count Period Beginning At	19 - SW 15th St (Northbound)				19 - SW 15th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	5	0	0	0	4	0	0	2	0	1	0	0	0	0	0	13	
7:05 AM	2	7	0	0	0	8	3	0	5	0	0	0	0	0	0	0	25	
7:10 AM	1	5	0	0	0	1	3	0	1	0	0	0	0	0	0	0	11	
7:15 AM	1	6	0	0	0	6	4	0	2	0	0	0	0	0	0	0	19	
7:20 AM	5	8	0	0	0	6	3	0	1	0	2	0	0	0	0	0	25	
7:25 AM	2	10	0	0	0	5	5	0	2	0	0	0	0	0	0	0	24	
7:30 AM	1	19	0	0	0	8	9	0	2	0	4	0	0	0	0	0	43	
7:35 AM	6	14	0	0	0	8	6	0	3	0	2	0	0	0	0	0	39	
7:40 AM	11	32	0	0	0	8	7	0	5	0	0	0	0	0	0	0	63	
7:45 AM	7	22	0	0	0	12	16	0	4	0	1	0	0	0	0	0	62	
7:50 AM	8	29	0	0	0	13	9	0	4	0	3	0	0	0	0	0	66	
7:55 AM	4	20	0	0	0	17	7	0	7	0	1	0	0	0	0	0	56	446
8:00 AM	3	29	0	0	0	20	12	0	8	0	0	0	0	0	0	0	72	505
8:05 AM	6	26	0	0	0	5	11	0	5	0	0	0	0	0	0	0	53	533
8:10 AM	1	20	0	0	0	13	8	0	7	0	0	0	0	0	0	0	49	571
8:15 AM	3	25	0	0	0	7	11	0	5	0	0	0	0	0	0	0	51	603
8:20 AM	5	14	0	0	0	10	5	0	5	0	2	0	0	0	0	0	41	619
8:25 AM	2	15	0	0	0	12	9	0	7	0	3	0	0	0	0	0	48	643
8:30 AM	1	10	0	0	0	12	10	0	4	0	2	0	0	0	0	0	39	639
8:35 AM	2	11	0	0	0	7	5	0	1	0	3	0	0	0	0	0	29	629
8:40 AM	5	23	0	0	0	13	7	0	6	0	1	0	0	0	0	0	55	621
8:45 AM	6	18	0	0	0	10	10	0	9	0	1	0	0	0	0	0	54	613
8:50 AM	1	18	0	0	0	15	8	0	4	0	1	0	0	0	0	0	47	594
8:55 AM	7	12	0	0	0	14	14	0	8	0	0	0	0	0	0	0	55	593
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	60	312	0	0	0	200	112	0	76	0	16	0	0	0	0	0	776	
Heavy Trucks	4	12	0	0	0	8	0	0	4	0	0	0	0	0	0	0	28	
Buses																		
Pedestrians		0				24				28				32			84	
Bicycles	4	32	0		0	8	24		0	0	4		0	0	0		72	
Scoters																		

*Comments:*



**LOCATION:** 20 - SW 15th St -- SW Washington Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543956  
**DATE:** Tue, Oct 19 2021

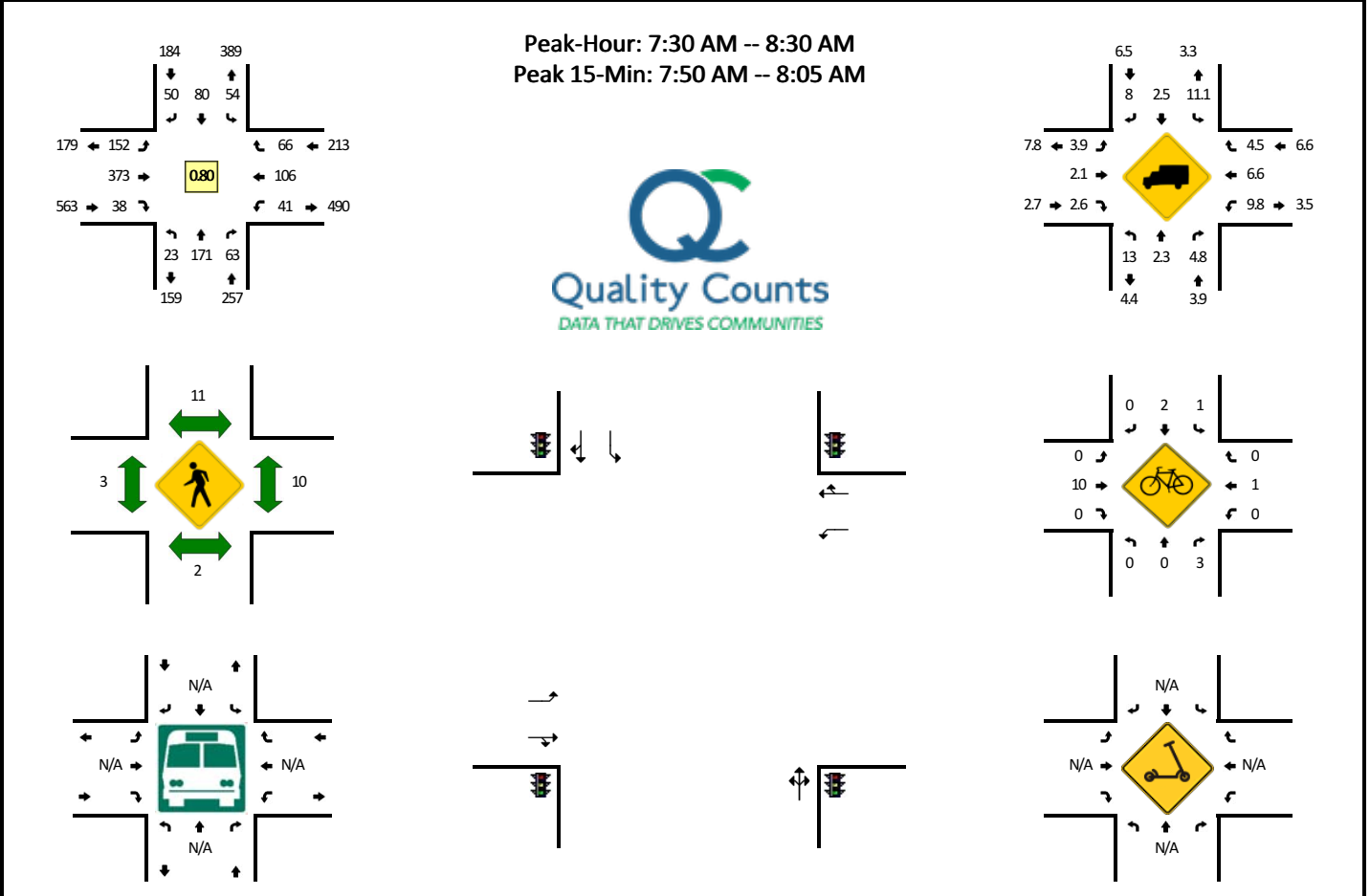


5-Min Count Period Beginning At	20 - SW 15th St (Northbound)				20 - SW 15th St (Southbound)				SW Washington Ave (Eastbound)				SW Washington Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	7	0	0	0	3	0	0	0	0	0	0	1	0	1	0	12	
7:05 AM	0	10	1	0	0	10	0	0	0	0	0	0	1	0	0	0	22	
7:10 AM	0	6	1	0	0	1	0	0	0	0	0	1	2	0	0	0	11	
7:15 AM	0	7	1	0	0	11	0	0	0	0	0	0	0	0	0	0	19	
7:20 AM	0	8	0	0	1	6	0	0	0	0	0	0	2	0	0	0	17	
7:25 AM	0	10	5	0	1	8	0	0	0	0	0	0	2	0	0	0	26	
7:30 AM	0	17	5	0	1	13	0	0	0	0	0	1	3	0	0	0	40	
7:35 AM	0	14	2	0	0	10	0	0	0	0	0	0	3	0	2	0	31	
7:40 AM	0	27	9	0	3	14	0	0	0	0	0	0	1	0	1	0	55	
7:45 AM	0	21	8	0	6	20	0	0	0	0	0	0	8	0	1	0	64	
7:50 AM	0	18	7	0	0	18	0	0	0	0	0	0	3	0	1	0	47	
7:55 AM	0	24	8	0	4	22	0	0	0	0	0	0	2	0	0	0	60	404
8:00 AM	0	21	16	0	4	28	0	0	0	0	1	0	4	0	2	0	76	468
8:05 AM	0	21	9	0	0	13	0	0	0	0	0	0	4	0	1	0	48	494
8:10 AM	0	20	7	0	4	16	0	0	0	0	0	2	3	0	0	0	52	535
8:15 AM	0	22	8	0	1	12	0	0	0	0	0	0	5	0	0	0	48	564
8:20 AM	0	13	3	0	2	13	0	0	0	0	0	0	1	0	2	0	34	581
8:25 AM	0	14	9	0	1	21	0	0	0	0	0	0	2	0	1	0	48	603
8:30 AM	0	11	3	0	3	17	0	0	0	0	0	0	3	0	0	0	37	600
8:35 AM	0	9	3	0	3	12	0	0	0	0	0	0	2	0	1	0	30	599
8:40 AM	0	20	10	0	3	15	0	0	0	0	0	1	5	0	1	0	55	599
8:45 AM	0	15	12	0	5	15	0	0	0	0	0	0	3	0	1	0	52	587
8:50 AM	0	16	5	0	1	19	0	0	0	0	0	0	4	0	0	0	45	585
8:55 AM	0	17	4	0	3	25	0	0	0	0	0	0	3	0	0	0	52	577
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	264	132	0	32	252	0	0	0	4	0	0	40	0	12	0	736	
Heavy Trucks	0	20	0		0	12	0		0	0	0		0	0	0		32	
Buses																		
Pedestrians		0				56				64				44			164	
Bicycles	0	24	0		0	16	0		0	0	0		0	0	8		48	
Scoters																		

*Comments:*

**LOCATION:** 21 - SW 35th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439115  
**DATE:** Tue, Oct 19 2021

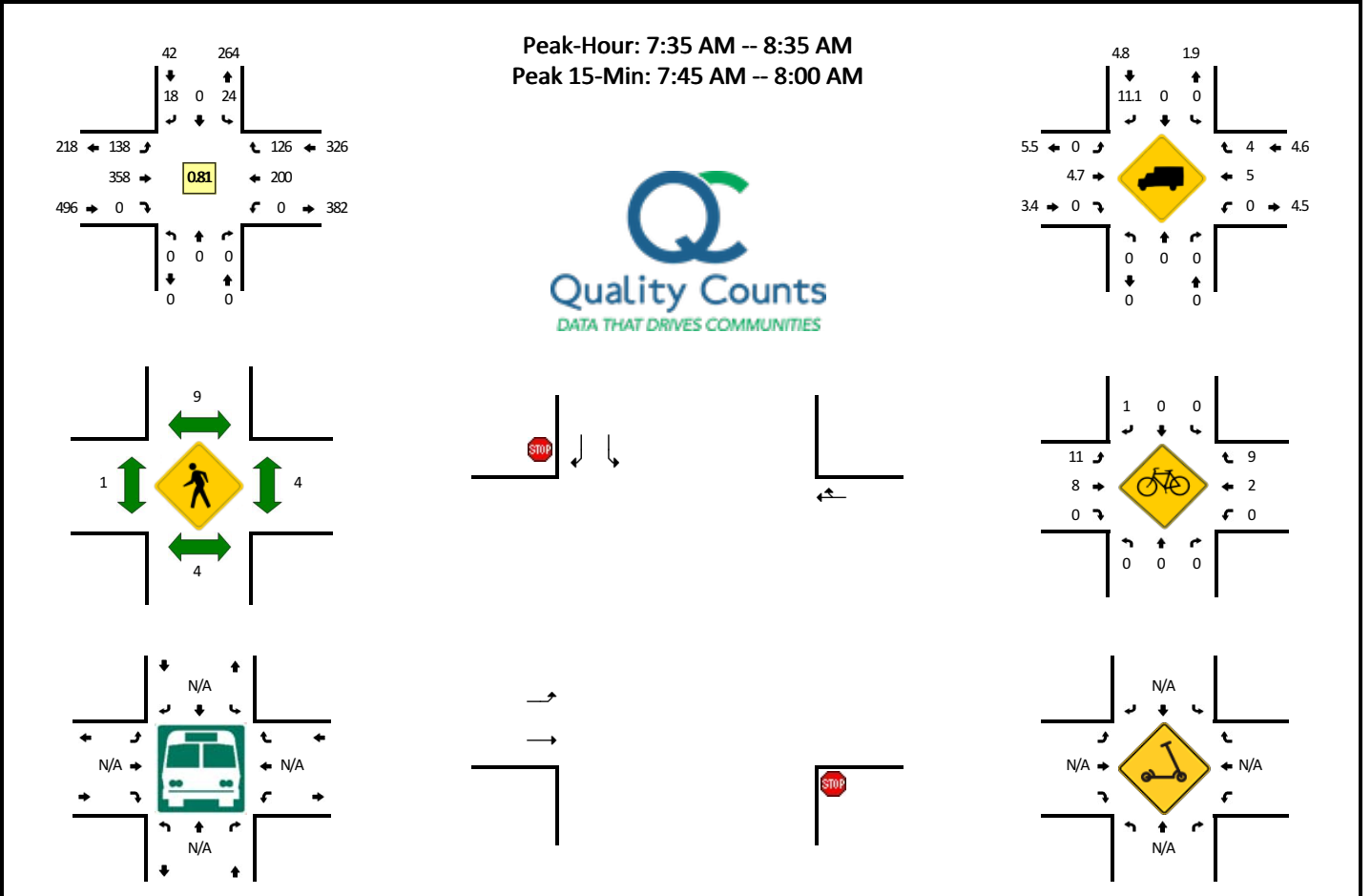


5-Min Count Period Beginning At	21 - SW 35th St (Northbound)				21 - SW 35th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	1	17	4	0	3	7	1	0	9	19	3	0	1	7	5	0	77	
7:35 AM	1	10	6	0	7	4	1	0	14	30	5	0	1	13	9	0	101	
7:40 AM	2	15	10	0	6	5	3	0	9	38	3	0	4	9	5	0	109	
7:45 AM	2	13	7	0	1	6	0	0	17	39	5	0	4	8	6	0	108	
7:50 AM	1	25	9	0	4	6	4	0	20	37	4	0	5	9	4	0	128	
7:55 AM	3	17	6	0	7	8	4	0	17	45	6	0	9	7	7	0	136	
8:00 AM	2	13	4	0	3	14	5	0	20	30	5	0	5	12	4	0	117	
8:05 AM	2	20	2	0	5	8	7	0	14	31	3	0	5	10	7	0	114	
8:10 AM	4	15	5	0	6	6	7	0	16	30	2	0	0	8	7	0	106	
8:15 AM	1	12	2	0	6	4	7	0	8	22	1	0	2	8	3	0	76	
8:20 AM	2	3	3	0	4	9	6	0	3	22	0	0	2	11	6	0	71	
8:25 AM	2	11	5	0	2	3	5	0	5	30	1	0	3	4	3	0	74	1217
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	24	220	76	0	56	112	52	0	228	448	60	0	76	112	60	0	1524	
Heavy Trucks	0	4	4		12	4	12		4	4	0		4	4	0		52	
Buses																		
Pedestrians		4				12				0				12			28	
Bicycles	0	0	8		0	0	0		0	8	0		0	4	0		20	
Scoters																		

Comments:

**LOCATION:** 22 - SW 30th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543939  
**DATE:** Tue, Oct 19 2021

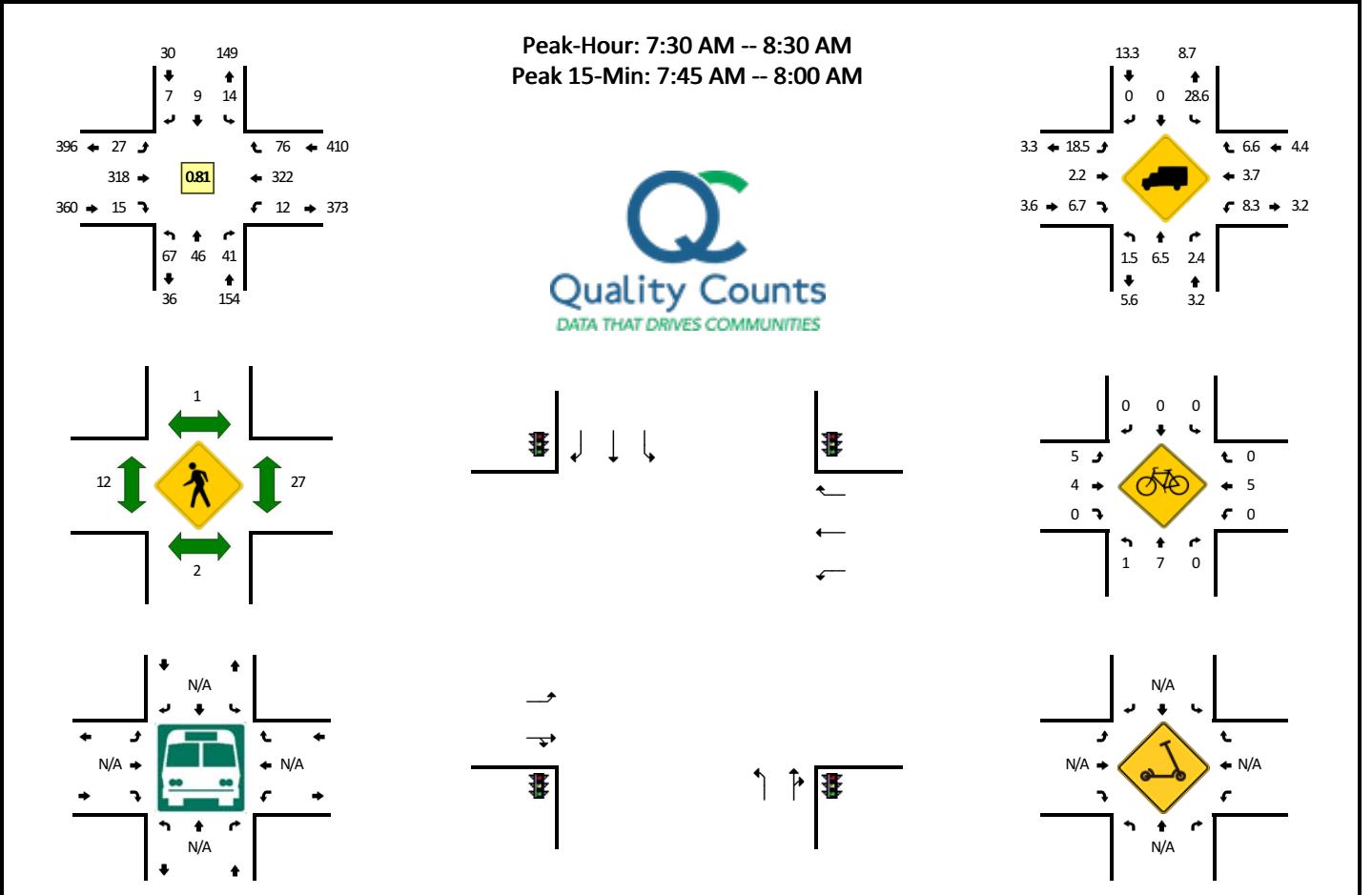


5-Min Count Period Beginning At	22 - SW 30th St (Northbound)				22 - SW 30th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	5	3	0	0	0	9	5	0	22	
7:05 AM	0	0	0	0	0	0	1	0	7	8	0	0	0	7	3	0	26	
7:10 AM	0	0	0	0	0	0	0	0	6	10	0	0	0	9	3	0	28	
7:15 AM	0	0	0	0	1	0	0	0	4	8	0	0	0	3	3	0	19	
7:20 AM	0	0	0	0	0	0	0	0	9	15	0	0	0	10	3	0	37	
7:25 AM	0	0	0	0	2	0	1	0	9	17	0	0	0	11	12	0	52	
7:30 AM	0	0	0	0	1	0	1	0	6	22	0	0	0	11	4	0	45	
7:35 AM	0	0	0	0	2	0	6	0	10	32	0	0	0	17	10	0	77	
7:40 AM	0	0	0	0	3	0	1	0	15	40	0	0	0	18	8	0	85	
7:45 AM	0	0	0	0	1	0	2	0	13	27	0	0	0	17	14	0	74	
7:50 AM	0	0	0	0	4	0	1	0	22	38	0	0	0	16	9	0	90	
7:55 AM	0	0	0	0	2	0	1	0	16	43	0	0	0	26	16	0	104	659
8:00 AM	0	0	0	0	3	0	2	0	8	25	0	0	0	20	10	0	68	705
8:05 AM	0	0	0	0	1	0	1	0	15	24	0	0	0	18	11	0	70	749
8:10 AM	0	0	0	0	3	0	2	0	15	30	0	0	0	12	6	0	68	789
8:15 AM	0	0	0	0	0	0	0	0	4	24	0	0	0	18	12	0	58	828
8:20 AM	0	0	0	0	1	0	2	0	8	23	0	0	0	13	17	0	64	855
8:25 AM	0	0	0	0	3	0	0	0	8	24	0	0	0	12	6	0	53	856
8:30 AM	0	0	0	0	1	0	0	0	4	28	0	0	0	13	7	0	53	864
8:35 AM	0	0	0	0	1	0	2	0	7	22	0	0	0	11	14	0	57	844
8:40 AM	0	0	0	0	3	0	2	0	12	26	0	0	0	22	10	0	75	834
8:45 AM	0	0	0	0	3	0	0	0	17	25	0	0	0	13	4	0	62	822
8:50 AM	0	0	0	0	2	0	0	0	11	16	0	0	0	14	18	0	61	793
8:55 AM	0	0	0	0	3	0	3	0	10	25	0	0	0	12	9	0	62	751
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	28	0	16	0	204	432	0	0	0	236	156	0	1072	
Heavy Trucks	0	0	0	0	0	0	0	0	0	20	0	0	0	8	4	0	32	
Buses																		
Pedestrians		0				4				0				4			8	
Bicycles	0	0	0		0	0	4		24	8	0		0	8	20		64	
Scoters																		

*Comments:*

**LOCATION:** 23 - SW 26th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439117  
**DATE:** Tue, Oct 19 2021

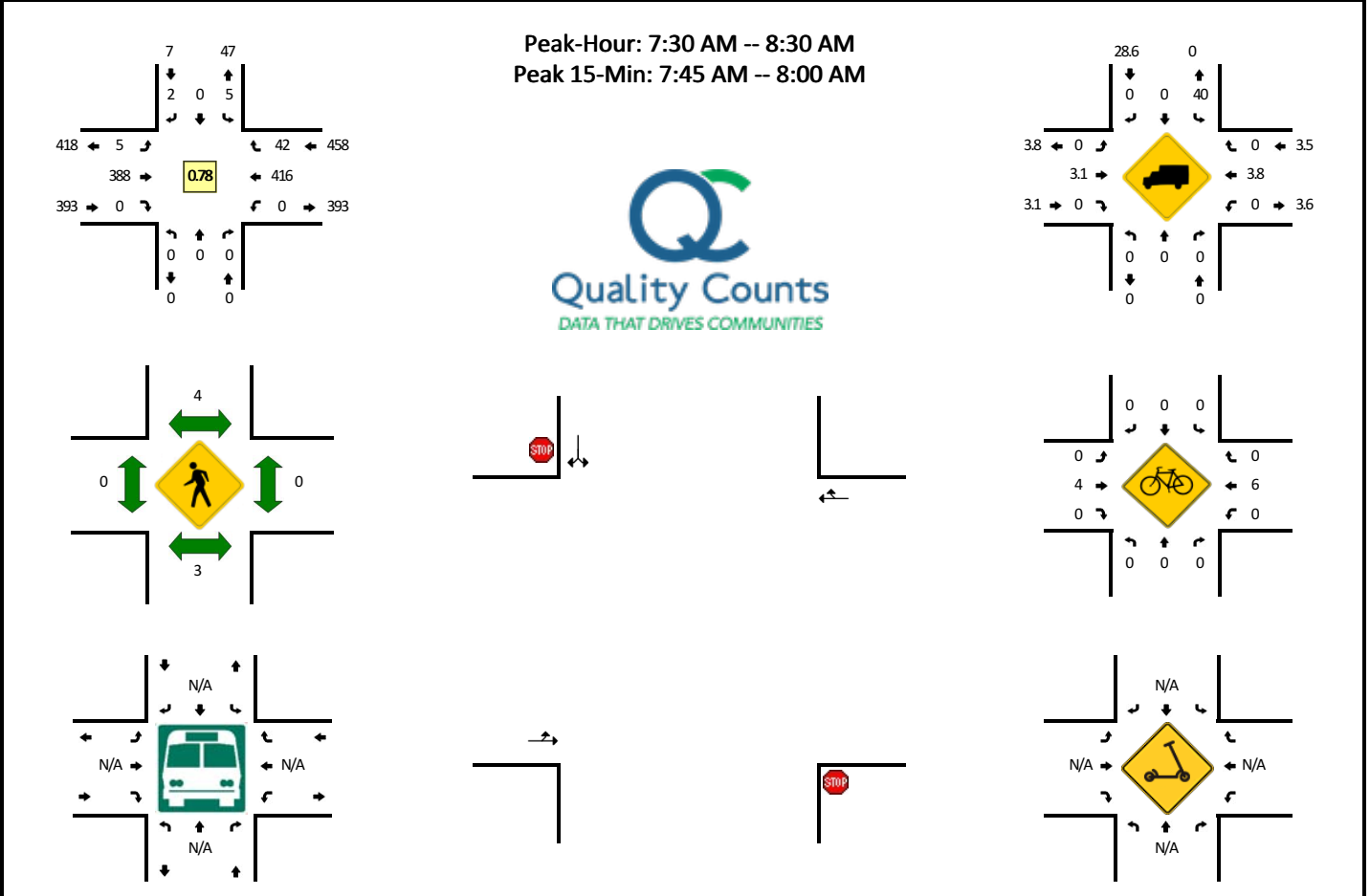


5-Min Count Period Beginning At	23 - SW 26th St (Northbound)				23 - SW 26th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	4	1	1	0	1	2	0	0	2	18	0	0	1	20	2	0	52	
7:35 AM	5	1	1	0	2	0	1	0	5	30	1	0	0	25	7	0	78	
7:40 AM	8	6	8	0	0	0	0	0	1	38	3	0	1	28	7	0	100	
7:45 AM	2	5	10	0	0	2	1	0	2	31	2	0	1	31	10	0	97	
7:50 AM	3	2	4	0	3	0	0	0	0	28	3	0	2	36	8	0	89	
7:55 AM	10	4	4	0	1	1	2	0	2	36	1	0	2	36	10	0	109	
8:00 AM	3	4	1	0	2	0	2	0	1	28	0	0	1	29	7	0	78	
8:05 AM	5	9	4	0	0	0	0	0	2	23	1	0	0	31	7	0	82	
8:10 AM	6	4	4	0	0	1	0	0	3	26	1	0	2	25	3	0	75	
8:15 AM	9	5	1	0	1	2	1	0	3	15	0	0	0	21	4	0	62	
8:20 AM	6	2	0	0	1	0	0	0	2	26	0	0	1	23	7	0	68	
8:25 AM	6	3	3	0	3	1	0	0	4	19	3	0	1	17	4	0	64	954
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	60	44	72	0	16	12	12	0	16	380	24	0	20	412	112	0	1180	
Heavy Trucks	4	0	4		4	0	0		0	16	0		0	12	4		44	
Buses																		
Pedestrians		0				0				4				20			24	
Bicycles	0	0	0		0	0	0		8	4	0		0	12	0		24	
Scooters																		

*Comments:*

**LOCATION:** 24 - SW Stadium Ave -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439119  
**DATE:** Tue, Oct 19 2021

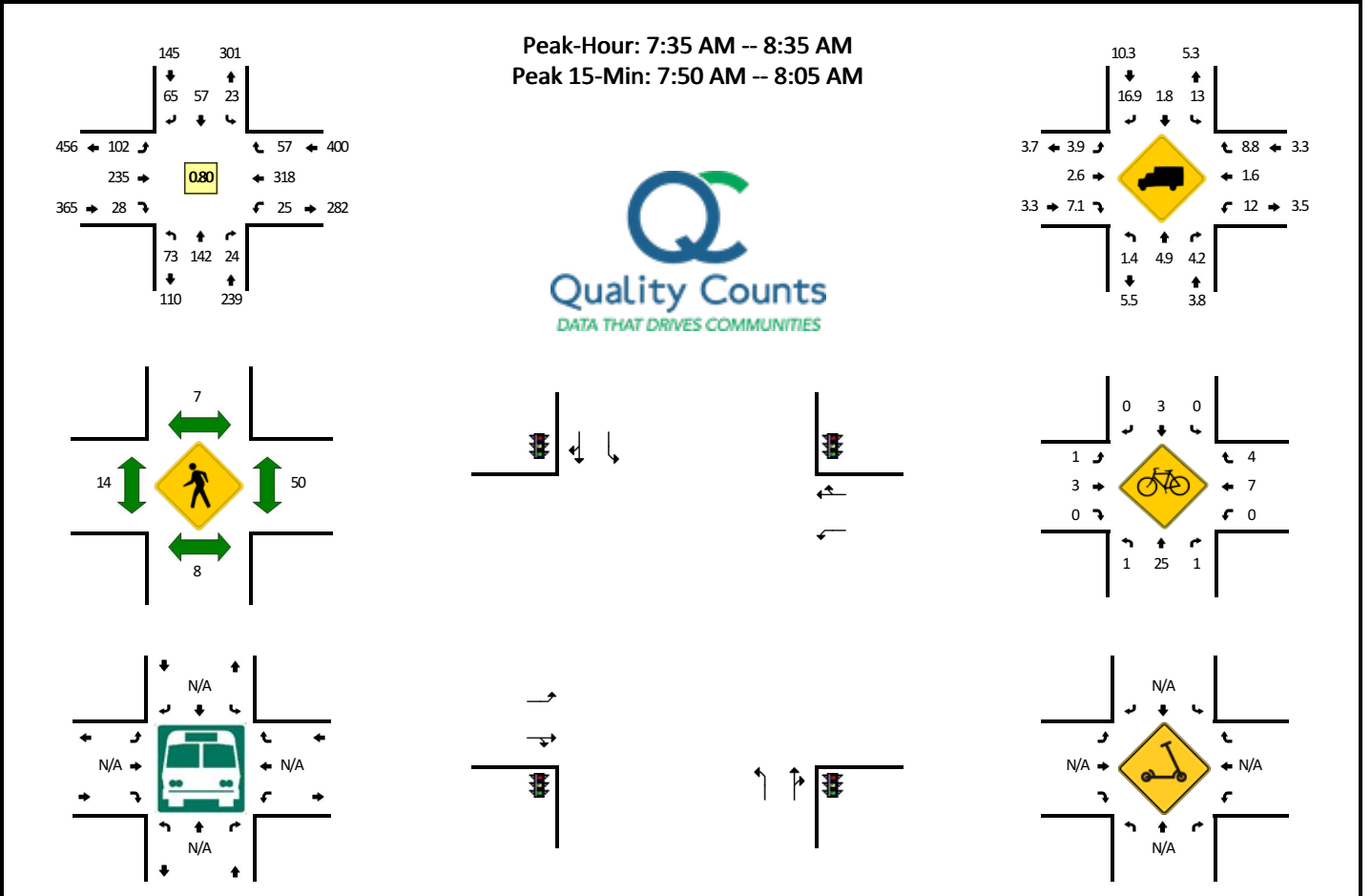


5-Min Count Period Beginning At	24 - SW Stadium Ave (Northbound)				24 - SW Stadium Ave (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	0	0	0	0	0	0	0	1	21	0	0	0	23	2	0	47	
7:35 AM	0	0	0	0	1	0	0	0	0	31	0	0	0	32	2	0	66	
7:40 AM	0	0	0	0	0	0	0	0	0	52	0	0	0	41	4	0	97	
7:45 AM	0	0	0	0	2	0	0	0	0	41	0	0	0	40	3	0	86	
7:50 AM	0	0	0	0	0	0	0	0	0	34	0	0	0	47	3	0	84	
7:55 AM	0	0	0	0	1	0	0	0	0	48	0	0	0	50	6	0	105	
8:00 AM	0	0	0	0	0	0	0	0	0	32	0	0	0	40	2	0	74	
8:05 AM	0	0	0	0	0	0	0	0	1	28	0	0	0	36	7	0	72	
8:10 AM	0	0	0	0	0	0	1	0	0	28	0	0	0	29	4	0	62	
8:15 AM	0	0	0	0	1	0	1	0	2	19	0	0	0	27	4	0	54	
8:20 AM	0	0	0	0	0	0	0	0	0	28	0	0	0	30	5	0	63	
8:25 AM	0	0	0	0	0	0	0	0	1	26	0	0	0	21	0	0	48	858
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	12	0	0	0	0	492	0	0	0	548	48	0	1100	
Heavy Trucks	0	0	0	0	8	0	0	0	0	24	0	0	0	12	0	0	44	
Buses																		
Pedestrians		8				0				0				0			8	
Bicycles	0	0	0		0	0	0		0	4	0		0	8	0		12	
Scooters																		

*Comments:*

**LOCATION:** 25 - SW 15th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543945  
**DATE:** Tue, Oct 19 2021

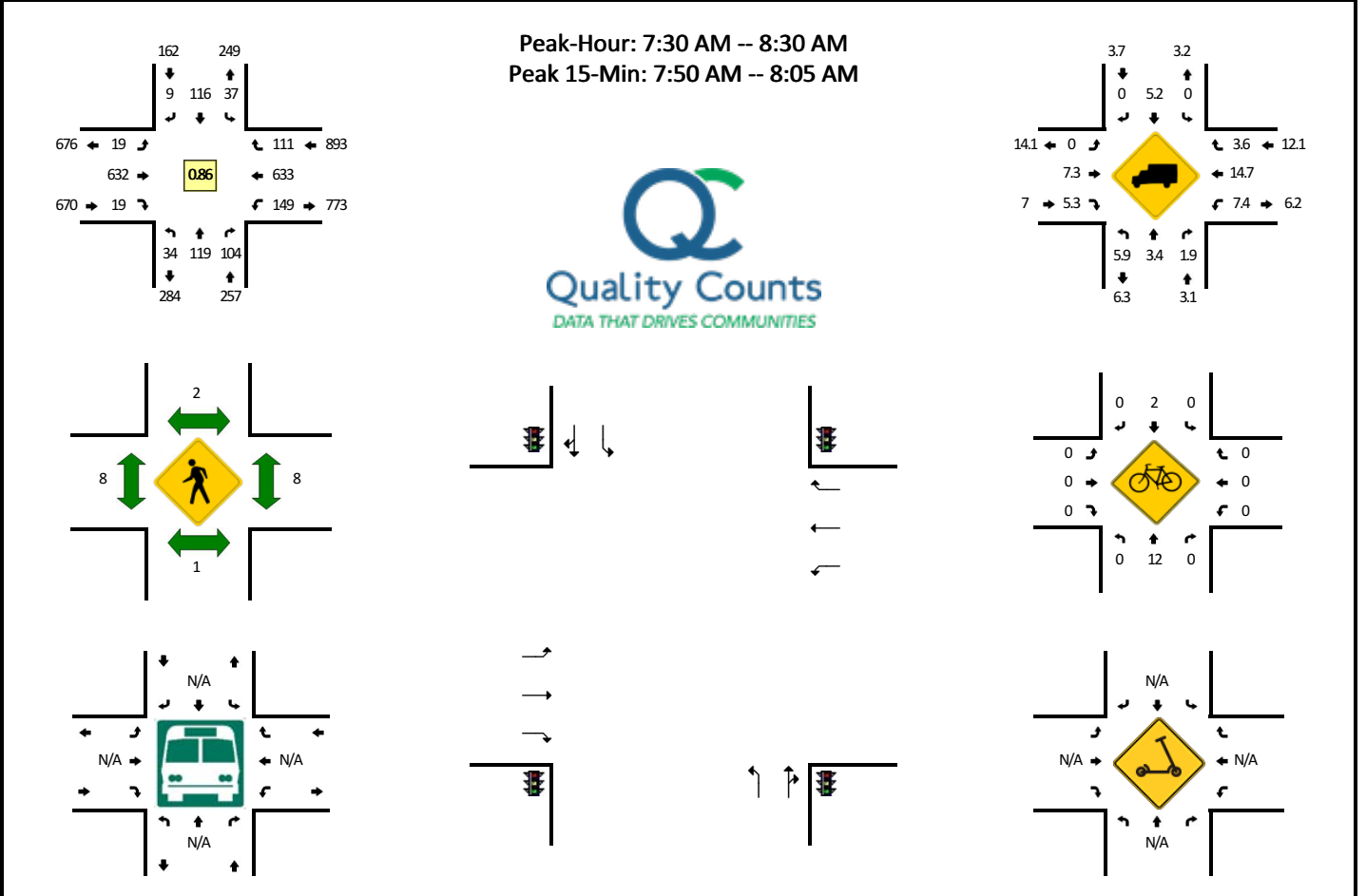


5-Min Count Period Beginning At	25 - SW 15th St (Northbound)				25 - SW 15th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	2	0	0	0	4	1	0	2	5	0	0	0	10	2	0	27	
7:05 AM	0	3	0	0	0	1	5	0	5	7	0	0	4	6	3	0	34	
7:10 AM	5	5	3	0	1	1	1	0	3	9	2	0	1	11	1	0	43	
7:15 AM	3	6	2	0	0	6	2	0	1	5	1	0	3	7	0	0	36	
7:20 AM	3	7	1	0	2	3	2	0	3	10	0	0	2	11	3	0	47	
7:25 AM	3	7	2	0	0	2	3	0	5	10	5	0	0	20	3	0	60	
7:30 AM	7	10	2	0	1	5	2	0	10	12	0	0	5	24	0	0	78	
7:35 AM	5	14	1	0	2	4	6	0	9	18	1	0	2	16	3	0	81	
7:40 AM	10	20	0	0	1	4	3	0	10	28	2	0	1	36	5	0	120	
7:45 AM	7	14	2	0	0	3	5	0	9	30	2	0	1	36	7	0	116	
7:50 AM	4	14	5	0	1	4	10	0	14	21	3	0	2	32	6	0	116	
7:55 AM	5	12	1	0	5	6	6	0	4	22	5	0	3	46	4	0	119	877
8:00 AM	17	15	3	0	2	10	8	0	15	19	4	0	4	21	5	0	123	973
8:05 AM	8	10	3	0	2	2	5	0	10	17	3	0	2	29	8	0	99	1038
8:10 AM	3	8	2	0	3	3	4	0	11	16	2	0	1	21	4	0	78	1073
8:15 AM	4	18	1	0	2	5	3	0	3	11	1	0	3	26	6	0	83	1120
8:20 AM	5	9	2	0	2	6	4	0	5	19	1	0	5	27	3	0	88	1161
8:25 AM	3	4	1	0	2	4	6	0	7	21	1	0	1	13	4	0	67	1168
8:30 AM	2	4	3	0	1	6	5	0	5	13	3	0	0	15	2	0	59	1149
8:35 AM	5	4	1	0	1	2	4	0	6	14	1	0	3	35	5	0	81	1149
8:40 AM	3	14	0	0	1	9	5	0	10	17	0	0	1	16	10	0	86	1115
8:45 AM	2	13	1	0	2	3	8	0	5	20	0	0	1	20	5	0	80	1079
8:50 AM	5	7	1	0	1	5	7	0	10	16	2	0	1	23	2	0	80	1043
8:55 AM	5	8	2	0	1	4	4	0	5	11	2	0	2	21	4	0	69	993
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	104	164	36	0	32	80	96	0	132	248	48	0	36	396	60	0	1432	
Heavy Trucks	4	8	0		4	0	8		8	16	8		0	4	0		60	
Buses																		
Pedestrians		8				4				16				64			92	
Bicycles	4	16	0		0	8	0		0	0	0		0	8	4		40	
Scoters																		

Comments:

**LOCATION:** 26 - SW 35th St -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439121  
**DATE:** Tue, Oct 19 2021

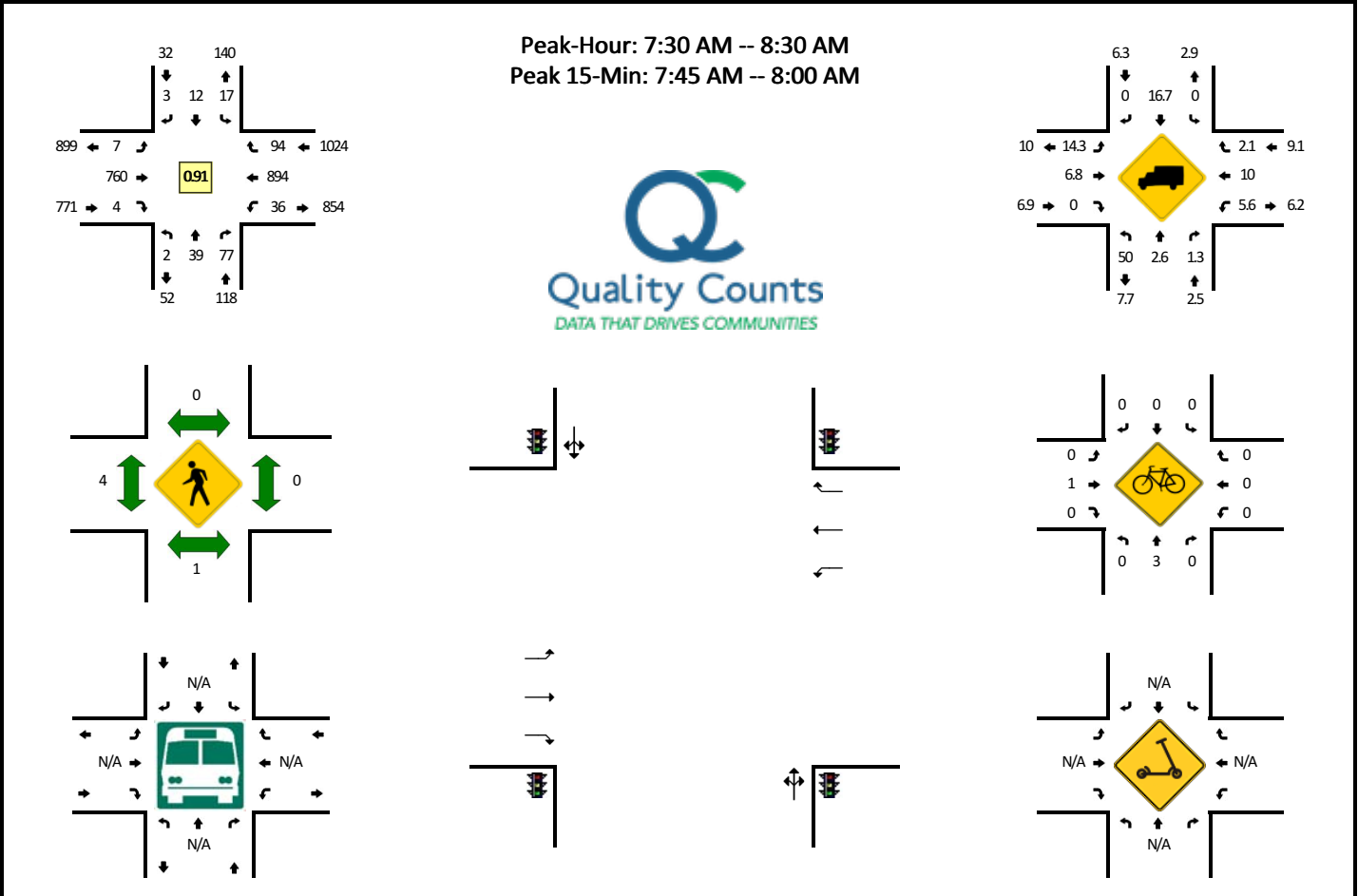


5-Min Count Period Beginning At	26 - SW 35th St (Northbound)				26 - SW 35th St (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	5	2	0	5	10	0	0	1	74	2	0	11	45	12	0	167	
7:35 AM	0	16	5	0	2	6	1	0	2	47	1	0	10	47	6	0	143	
7:40 AM	0	7	8	0	2	4	1	0	0	59	1	0	15	54	10	0	161	
7:45 AM	2	12	9	0	1	10	1	0	1	69	2	0	13	50	15	0	185	
7:50 AM	6	24	15	0	5	20	0	0	5	40	1	0	17	43	11	0	187	
7:55 AM	3	8	15	0	3	17	1	0	1	51	2	0	21	55	6	0	183	
8:00 AM	11	11	13	0	4	18	0	0	0	55	4	0	15	69	9	0	209	
8:05 AM	9	14	15	0	4	16	0	0	2	44	2	0	9	50	11	0	176	
8:10 AM	1	5	8	0	3	4	0	0	2	53	2	0	8	49	13	0	148	
8:15 AM	1	5	4	0	3	4	1	0	2	53	0	0	10	56	7	0	146	
8:20 AM	1	3	6	0	3	4	2	0	3	28	2	0	13	60	4	0	129	
8:25 AM	0	9	4	0	2	3	2	0	0	59	0	0	7	55	7	0	148	1982
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	80	172	172	0	48	220	4	0	24	584	28	0	212	668	104	0	2316	
Heavy Trucks	4	4	0		0	4	0		0	52	0		24	72	0		160	
Buses																		
Pedestrians		0				8				24				0			32	
Bicycles	0	28	0		0	0	0		0	0	0		0	0	0		28	
Scooters																		

Comments:

**LOCATION:** 27 - SW 26th St/SW Brooklane Dr -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439123  
**DATE:** Tue, Oct 19 2021



5-Min Count Period Beginning At	27 - SW 26th St/SW Brooklane Dr (Northbound)				27 - SW 26th St/SW Brooklane Dr (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	0	1	4	0	0	2	1	0	0	86	0	0	4	70	5	0	173	
7:35 AM	0	0	7	0	1	0	0	0	1	71	0	0	3	66	8	0	157	
7:40 AM	0	10	11	0	1	1	0	0	0	54	0	0	6	79	12	0	174	
7:45 AM	0	8	8	0	5	2	0	0	0	77	0	0	1	81	2	0	184	
7:50 AM	0	4	12	0	1	0	0	0	0	71	0	0	4	79	6	0	177	
7:55 AM	0	3	6	0	2	3	0	0	0	60	0	0	6	85	10	0	175	
8:00 AM	1	2	6	0	0	1	0	0	1	67	3	0	2	73	4	0	160	
8:05 AM	0	3	7	0	1	0	0	0	2	69	1	0	2	77	10	0	172	
8:10 AM	0	1	5	0	1	1	0	0	2	56	0	0	1	78	12	0	157	
8:15 AM	0	3	4	0	2	0	1	0	1	56	0	0	1	76	8	0	152	
8:20 AM	0	1	3	0	2	1	1	0	0	49	0	0	3	64	10	0	134	
8:25 AM	1	3	4	0	1	1	0	0	0	44	0	0	3	66	7	0	130	1945

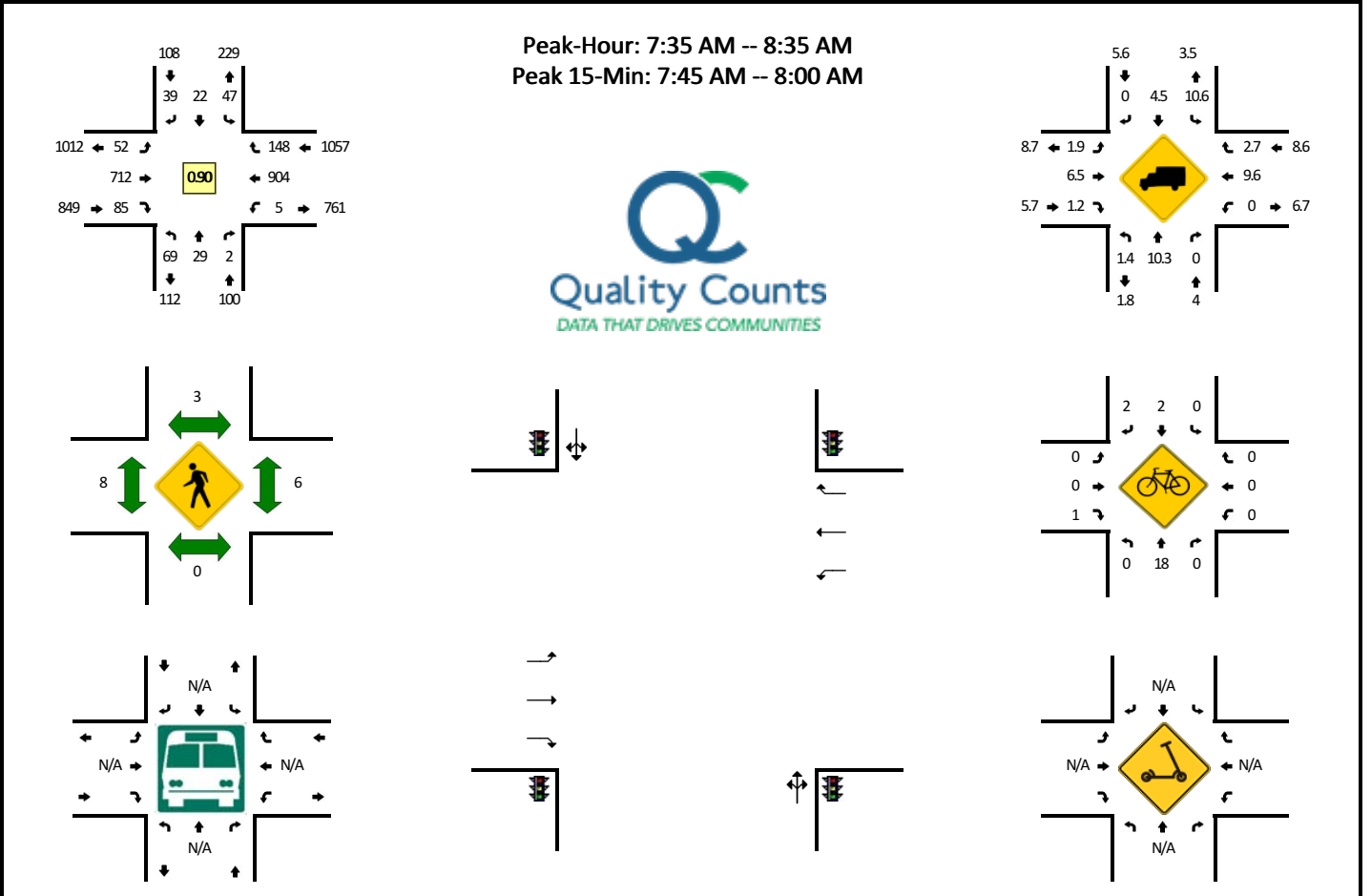
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	60	104	0	32	20	0	0	0	832	0	0	44	980	72	0	2144
Heavy Trucks	0	0	0	0	0	0	0	0	0	68	0	0	0	72	4	0	144
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:



**LOCATION:** 28 - SW 15th St -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543951  
**DATE:** Tue, Oct 19 2021

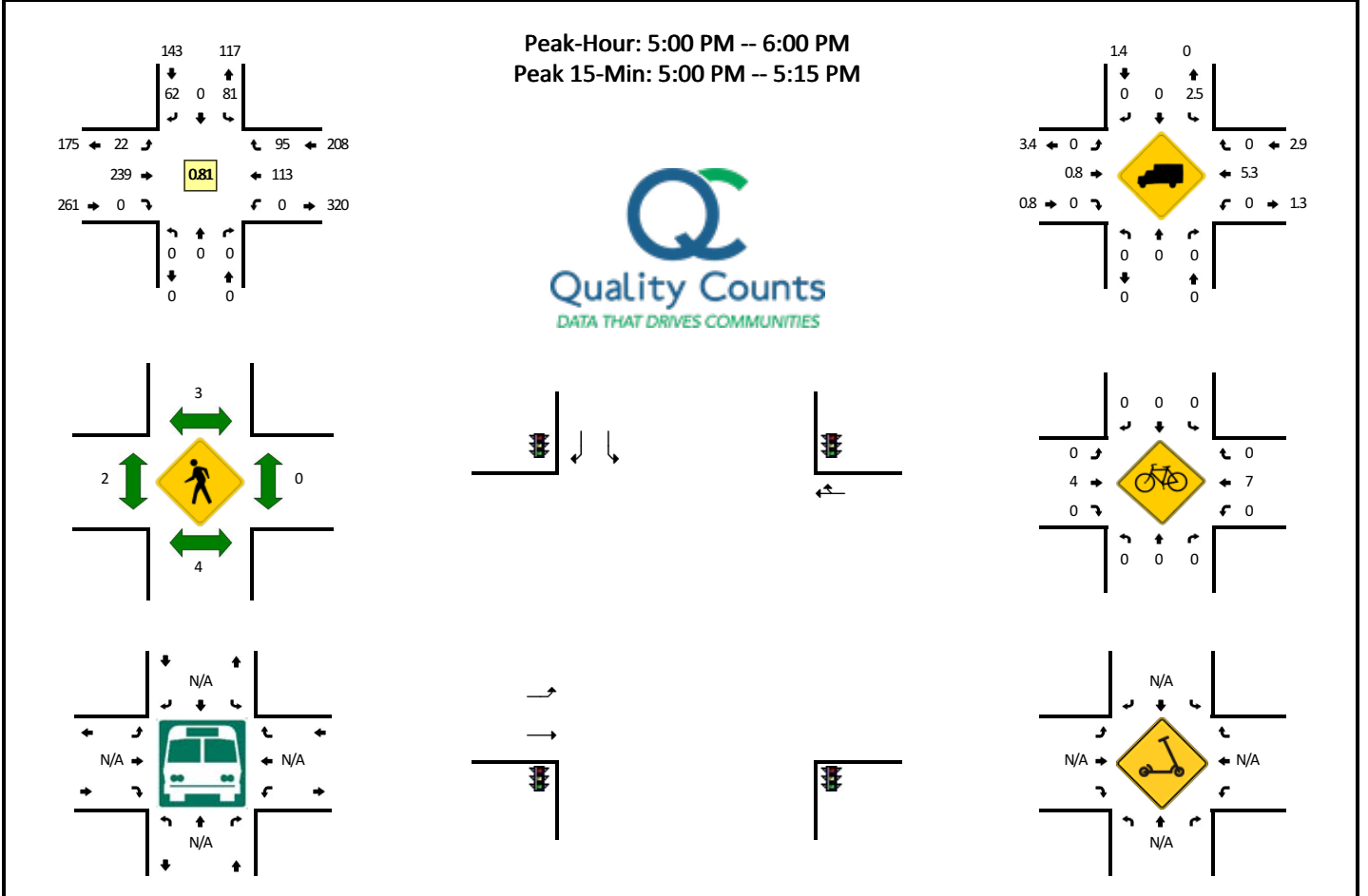


5-Min Count Period Beginning At	28 - SW 15th St (Northbound)				28 - SW 15th St (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	1	0	0	2	0	1	0	0	42	2	0	0	68	1	0	118	
7:05 AM	2	2	0	0	2	0	2	0	0	39	3	0	1	36	1	0	88	
7:10 AM	4	2	0	0	3	1	1	0	4	45	4	0	0	50	4	0	118	
7:15 AM	0	2	1	0	5	0	2	0	0	53	9	0	0	72	9	0	153	
7:20 AM	3	2	0	0	3	2	4	0	1	55	3	0	0	80	4	0	157	
7:25 AM	3	1	1	0	5	3	2	0	2	55	4	0	0	52	8	0	136	
7:30 AM	5	3	1	0	6	1	1	0	5	70	8	0	1	81	19	0	201	
7:35 AM	3	2	0	0	4	0	3	0	5	65	6	0	1	81	10	0	180	
7:40 AM	5	4	0	0	4	0	2	0	6	68	4	0	0	76	22	0	191	
7:45 AM	15	3	1	0	5	2	5	0	6	62	6	0	0	65	11	0	181	
7:50 AM	7	1	0	0	3	2	0	0	9	74	11	0	0	88	10	0	205	
7:55 AM	7	2	0	0	2	0	6	0	4	62	9	0	0	87	19	0	198	1926
8:00 AM	8	5	0	0	5	8	6	0	2	54	7	0	0	55	22	0	172	1980
8:05 AM	6	2	0	0	3	1	1	0	1	59	12	0	1	92	14	0	192	2084
8:10 AM	4	1	0	0	3	3	1	0	6	60	7	0	0	84	8	0	177	2143
8:15 AM	6	5	0	0	3	2	6	0	8	50	7	0	0	68	12	0	167	2157
8:20 AM	3	1	0	0	8	1	3	0	0	47	4	0	2	79	5	0	153	2153
8:25 AM	3	3	1	0	3	0	3	0	0	44	6	0	0	65	7	0	135	2152
8:30 AM	2	0	0	0	4	3	3	0	5	67	6	0	1	64	8	0	163	2114
8:35 AM	4	3	0	0	7	1	2	0	2	53	6	0	0	57	8	0	143	2077
8:40 AM	5	4	0	0	2	1	4	0	3	49	4	0	0	65	10	0	147	2033
8:45 AM	11	2	1	0	3	1	1	0	4	66	10	0	1	46	5	0	151	2003
8:50 AM	4	1	0	0	3	1	3	0	1	61	5	0	0	73	10	0	162	1960
8:55 AM	7	0	1	0	4	1	3	0	5	44	5	0	3	49	10	0	132	1894
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	116	24	4	0	40	16	44	0	76	792	104	0	0	960	160	0	2336	
Heavy Trucks	0	4	0		0	0	0		4	52	0		0	88	4		152	
Buses																		
Pedestrians		0				4				4				4			12	
Bicycles	0	20	0		0	4	4		0	0	0		0	0	0		28	
Scoters																		

*Comments:*

**LOCATION:** 1 - NW 36th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543988  
**DATE:** Tue, Oct 19 2021

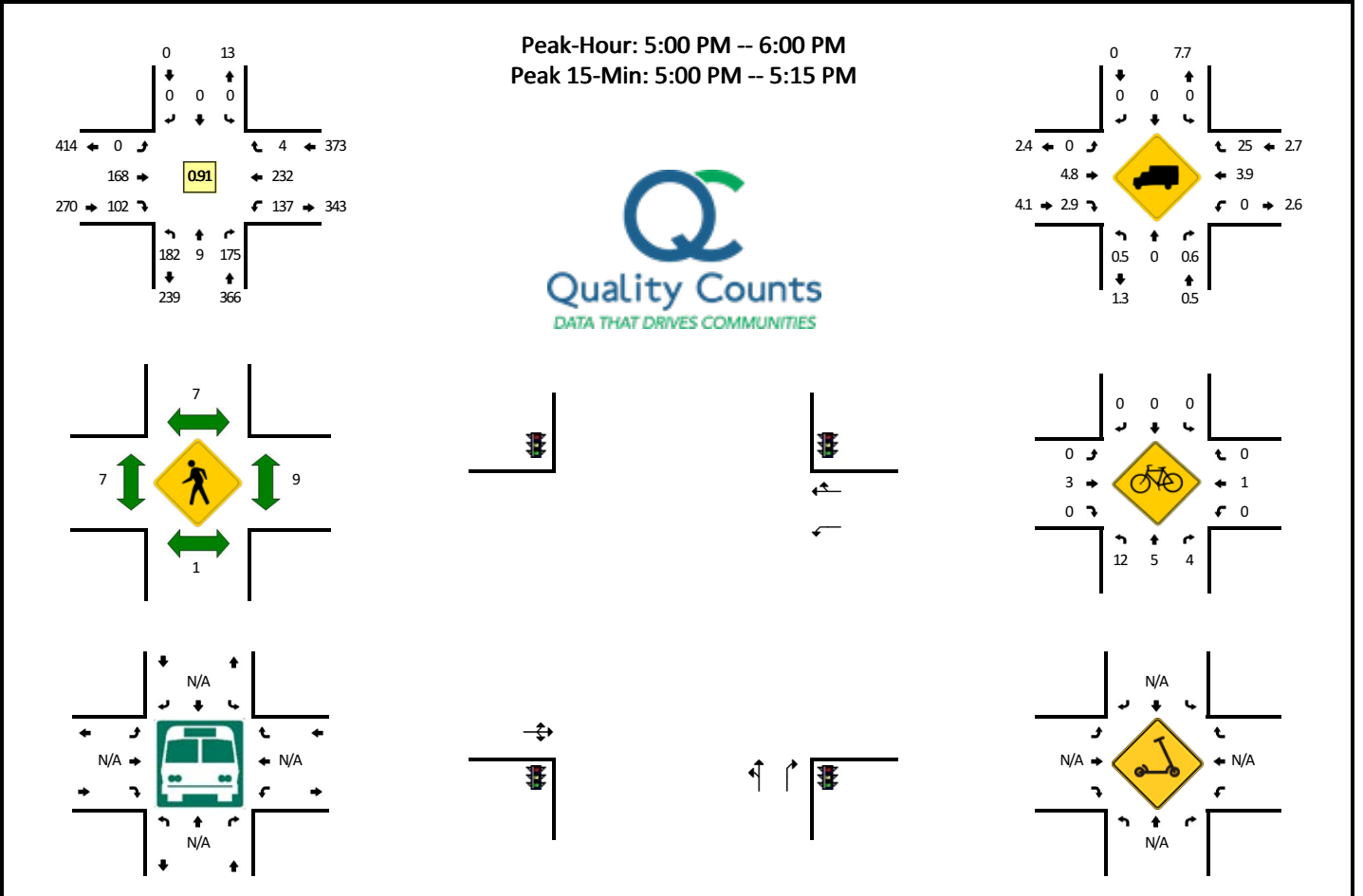


5-Min Count Period Beginning At	1 - NW 36th St (Northbound)				1 - NW 36th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	0	0	0	9	0	4	0	1	19	0	0	0	19	6	0	58	
5:05 PM	0	0	0	0	6	0	5	0	2	26	0	0	0	25	8	0	72	
5:10 PM	0	0	0	0	7	0	11	0	5	20	0	0	0	8	9	0	60	
5:15 PM	0	0	0	0	4	0	5	0	0	21	0	0	0	4	10	0	44	612
5:20 PM	0	0	0	0	9	0	5	0	4	22	0	0	0	9	11	0	60	
5:25 PM	0	0	0	0	6	0	4	0	2	13	0	0	0	6	11	0	42	
5:30 PM	0	0	0	0	9	0	5	0	0	16	0	0	0	10	7	0	47	
5:35 PM	0	0	0	0	1	0	7	0	1	20	0	0	0	1	12	0	42	
5:40 PM	0	0	0	0	11	0	3	0	0	19	0	0	0	11	4	0	48	
5:45 PM	0	0	0	0	4	0	3	0	1	19	0	0	0	4	4	0	35	
5:50 PM	0	0	0	0	11	0	5	0	1	26	0	0	0	11	9	0	63	
5:55 PM	0	0	0	0	4	0	5	0	5	18	0	0	0	5	4	0	41	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	0	0	0	88	0	80	0	32	260	0	0	0	208	92	0	760	
Heavy Trucks	0	0	0	0	4	0	0	0	0	4	0	0	0	12	0	0	20	
Buses																		
Pedestrians		4				4				0				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	16	0		16	
Scooters																		

*Comments:*

**LOCATION:** 2 - NW 35th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543990  
**DATE:** Tue, Oct 26 2021

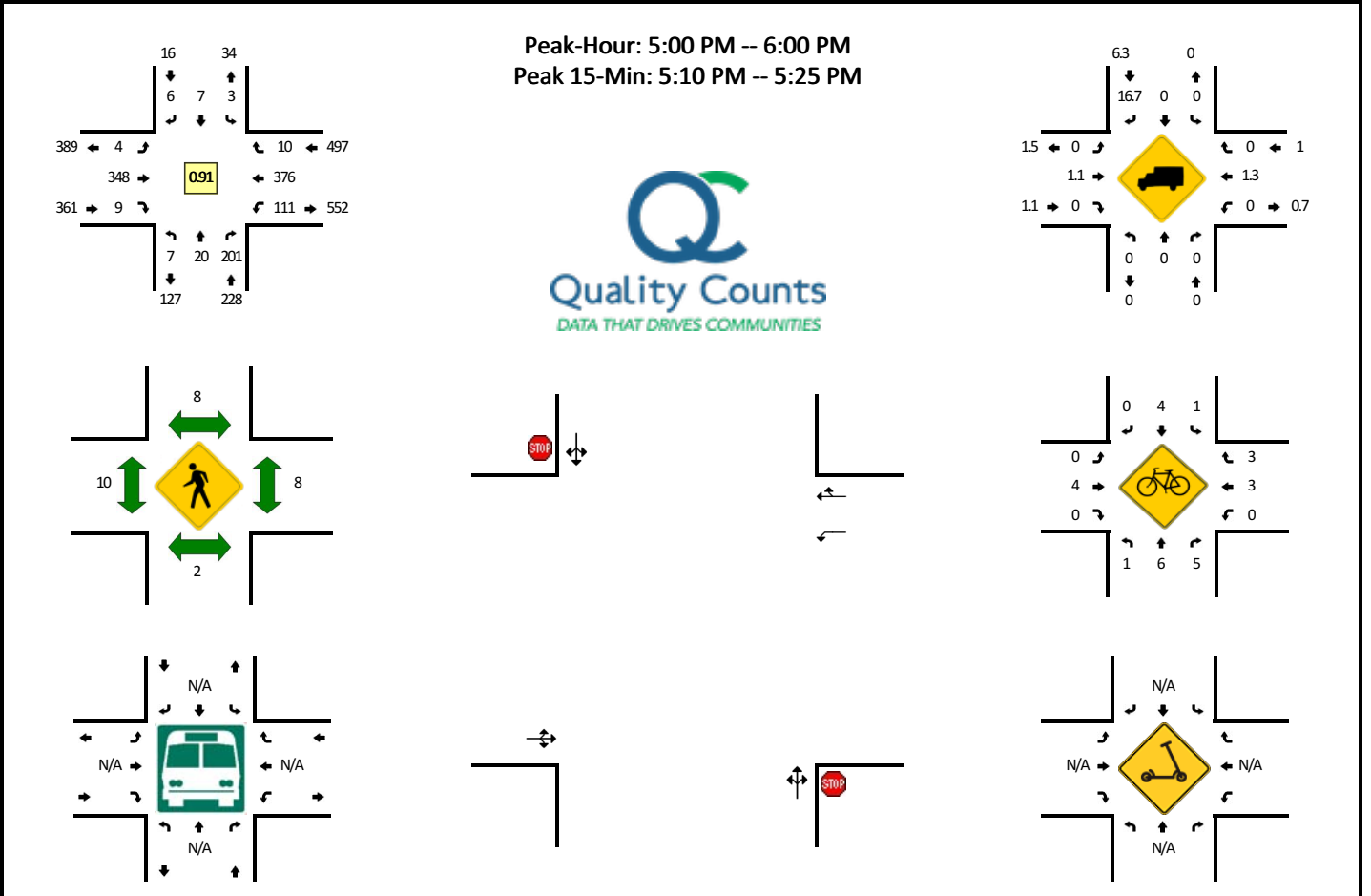


5-Min Count Period Beginning At	2 - NW 35th St (Northbound)				2 - NW 35th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	14	1	13	0	0	0	0	0	0	15	6	0	16	25	0	0	90	
5:05 PM	21	0	18	0	0	0	0	0	0	15	6	0	13	18	0	0	91	
5:10 PM	24	0	22	0	0	0	0	0	0	13	6	0	10	20	1	0	96	
5:15 PM	16	1	11	0	0	0	0	0	0	14	9	0	6	21	0	0	78	
5:20 PM	6	1	17	0	0	0	0	0	0	20	9	0	17	23	0	0	93	
5:25 PM	22	1	20	0	0	0	0	0	0	13	2	0	19	20	2	0	99	
5:30 PM	16	0	8	0	0	0	0	0	0	15	7	0	4	15	0	0	65	
5:35 PM	19	0	14	0	0	0	0	0	0	8	8	0	17	21	0	0	87	
5:40 PM	13	0	19	0	0	0	0	0	0	15	11	0	7	15	0	0	80	
5:45 PM	8	1	12	0	0	0	0	0	0	8	9	0	11	20	1	0	70	
5:50 PM	10	1	7	0	0	0	0	0	0	17	20	0	7	19	0	0	81	
5:55 PM	13	3	14	0	0	0	0	0	0	15	9	0	10	15	0	0	79	
																	1009	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	236	4	212	0	0	0	0	0	0	172	72	0	156	252	4	0	1108	
Heavy Trucks	4	0	0	0	0	0	0	0	0	16	0	0	0	8	0	0	28	
Buses																		
Pedestrians		0				0					4			4			8	
Bicycles	12	4	0		0	0	0		0	4	0		0	0	0		20	
Scooters																		

*Comments:*

**LOCATION:** 3 - NW 30th St -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543906  
**DATE:** Tue, Oct 19 2021

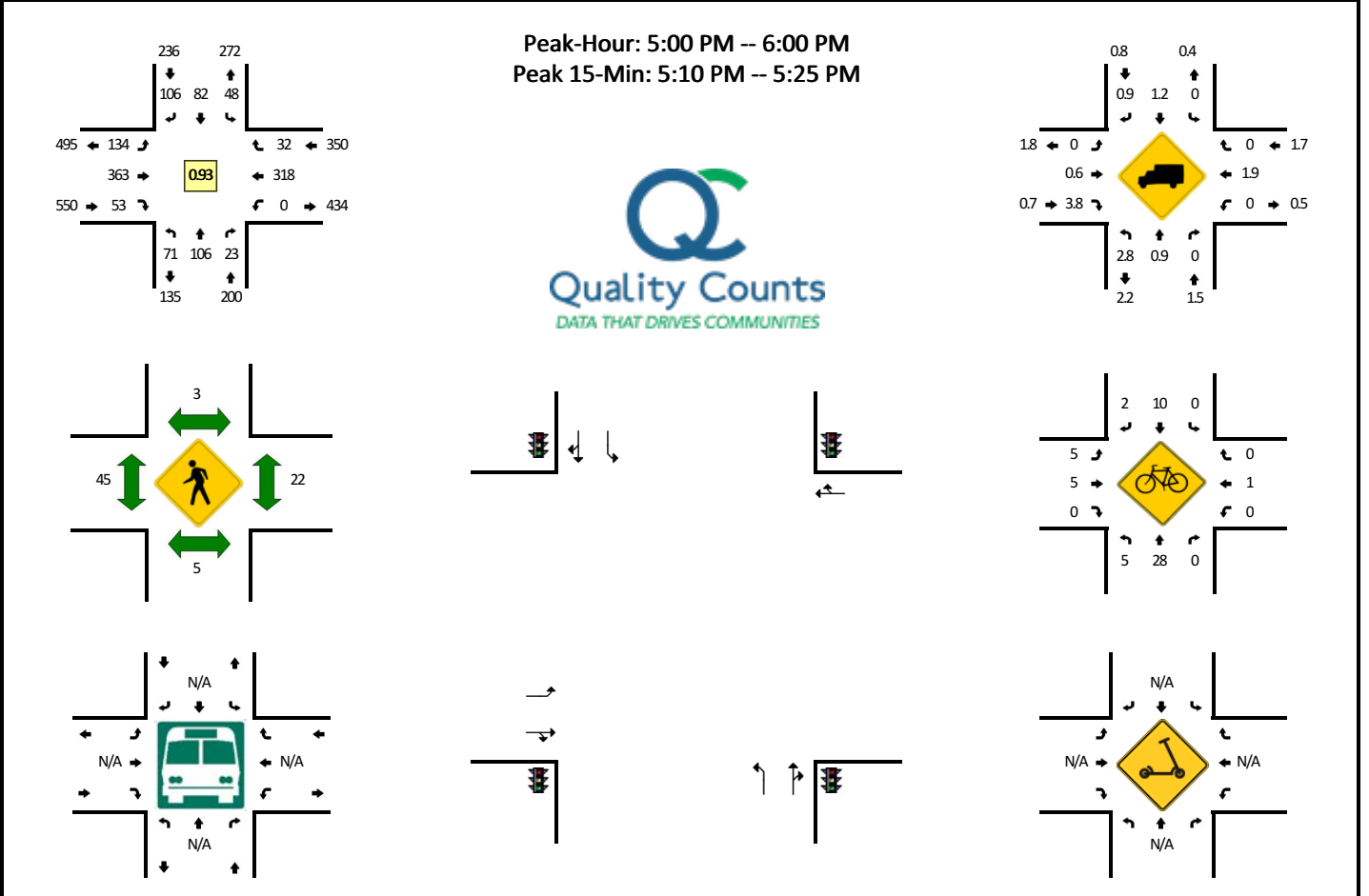


5-Min Count Period Beginning At	3 - NW 30th St (Northbound)				3 - NW 30th St (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	14	0	0	2	0	0	1	21	1	0	6	35	0	0	80	
4:05 PM	0	0	9	0	0	0	0	0	0	28	1	0	2	28	1	0	69	
4:10 PM	1	0	17	0	0	0	1	0	1	27	0	0	3	30	0	0	80	
4:15 PM	1	1	11	0	0	1	1	0	0	17	1	0	11	22	1	0	67	
4:20 PM	0	4	7	0	0	2	0	0	0	31	1	0	4	24	2	0	75	
4:25 PM	0	1	9	0	0	2	0	0	0	32	3	0	6	23	1	0	77	
4:30 PM	0	3	9	0	0	0	1	0	0	28	0	0	10	31	0	0	82	
4:35 PM	1	2	5	0	0	0	0	0	0	23	0	0	6	32	1	0	70	
4:40 PM	1	1	8	0	0	0	1	0	0	31	1	0	6	35	1	0	85	
4:45 PM	0	0	17	0	0	0	0	0	0	21	0	0	6	26	0	0	70	
4:50 PM	0	1	10	0	1	2	1	0	0	29	2	0	8	39	0	0	93	
4:55 PM	1	1	11	0	1	0	0	0	0	27	1	0	10	38	1	0	91	939
5:00 PM	0	1	20	0	1	0	0	0	1	24	1	0	10	20	0	0	78	937
5:05 PM	0	1	11	0	0	0	1	0	2	29	0	0	8	47	4	0	103	971
5:10 PM	2	2	20	0	0	0	0	0	0	39	0	0	8	32	1	0	104	995
5:15 PM	0	2	20	0	1	1	0	0	0	28	1	0	9	31	1	0	94	1022
5:20 PM	1	4	20	0	0	0	0	0	0	30	1	0	15	33	0	0	104	1051
5:25 PM	1	1	17	0	1	2	0	0	1	28	0	0	9	30	0	0	90	1064
5:30 PM	1	2	10	0	0	0	1	0	0	30	0	0	5	38	0	0	87	1069
5:35 PM	0	1	19	0	0	2	0	0	0	26	1	0	10	27	1	0	87	1086
5:40 PM	0	1	15	0	0	1	2	0	0	27	0	0	7	28	0	0	81	1082
5:45 PM	1	0	18	0	0	0	1	0	0	29	2	0	7	40	0	0	98	1110
5:50 PM	1	3	10	0	0	1	0	0	0	29	2	0	11	25	1	0	83	1100
5:55 PM	0	2	21	0	0	0	1	0	0	29	1	0	12	25	2	0	93	1102
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	12	32	240	0	4	4	0	0	0	388	8	0	128	384	8	0	1208	
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0	
Buses																		
Pedestrians		0				4				12				4			20	
Bicycles	0	8	0		0	8	0		0	4	0		0	12	8		40	
Scoters																		

*Comments:*

**LOCATION:** 4 - NW 29th St/NW Arnold Way -- NW Harrison Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543992  
**DATE:** Tue, Oct 19 2021



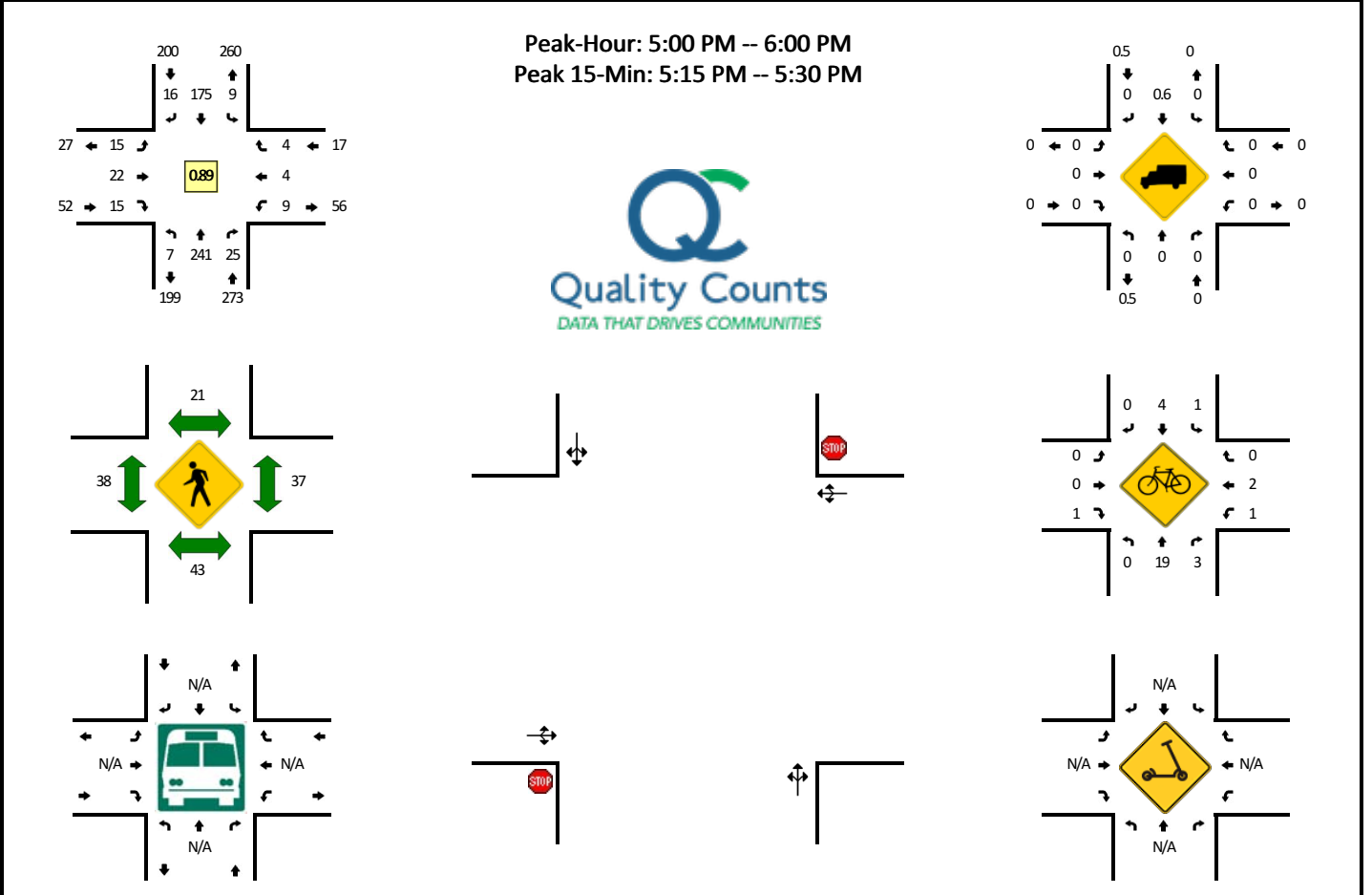
5-Min Count Period Beginning At	4 - NW 29th St/NW Arnold Way (Northbound)				4 - NW 29th St/NW Arnold Way (Southbound)				NW Harrison Blvd (Eastbound)				NW Harrison Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	1	11	4	0	3	10	9	0	11	32	4	0	0	20	5	0	110	
5:05 PM	10	8	0	0	6	4	13	0	4	27	3	0	0	34	1	0	110	
5:10 PM	7	14	1	0	4	3	9	0	17	43	2	0	0	30	2	0	132	
5:15 PM	7	9	2	0	2	7	11	0	12	36	4	0	0	19	4	0	113	
5:20 PM	9	10	1	0	5	5	10	0	10	30	4	0	0	28	3	0	115	
5:25 PM	4	9	2	0	3	7	12	0	15	32	2	0	0	25	3	0	114	
5:30 PM	10	3	3	0	6	5	5	0	11	23	3	0	0	27	0	0	96	
5:35 PM	5	9	0	0	6	4	7	0	10	25	9	0	0	28	3	0	106	
5:40 PM	2	11	2	0	5	7	6	0	15	29	5	0	0	25	2	0	109	
5:45 PM	9	10	0	0	6	8	5	0	11	26	7	0	0	32	4	0	118	
5:50 PM	3	5	4	0	2	11	8	0	7	26	8	0	0	31	3	0	108	
5:55 PM	4	7	4	0	0	11	11	0	11	34	2	0	0	19	2	0	105	1336

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	92	132	16	0	44	60	120	0	156	436	40	0	0	308	36	0	1440
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	8
Buses																	
Pedestrians		4				0				52				20			76
Bicycles	16	28	0		0	16	0		0	4	0		0	4	0		68
Scoters																	

Comments:

**LOCATION:** 5 - NW 30th St -- NW Orchard Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543994  
**DATE:** Tue, Oct 19 2021

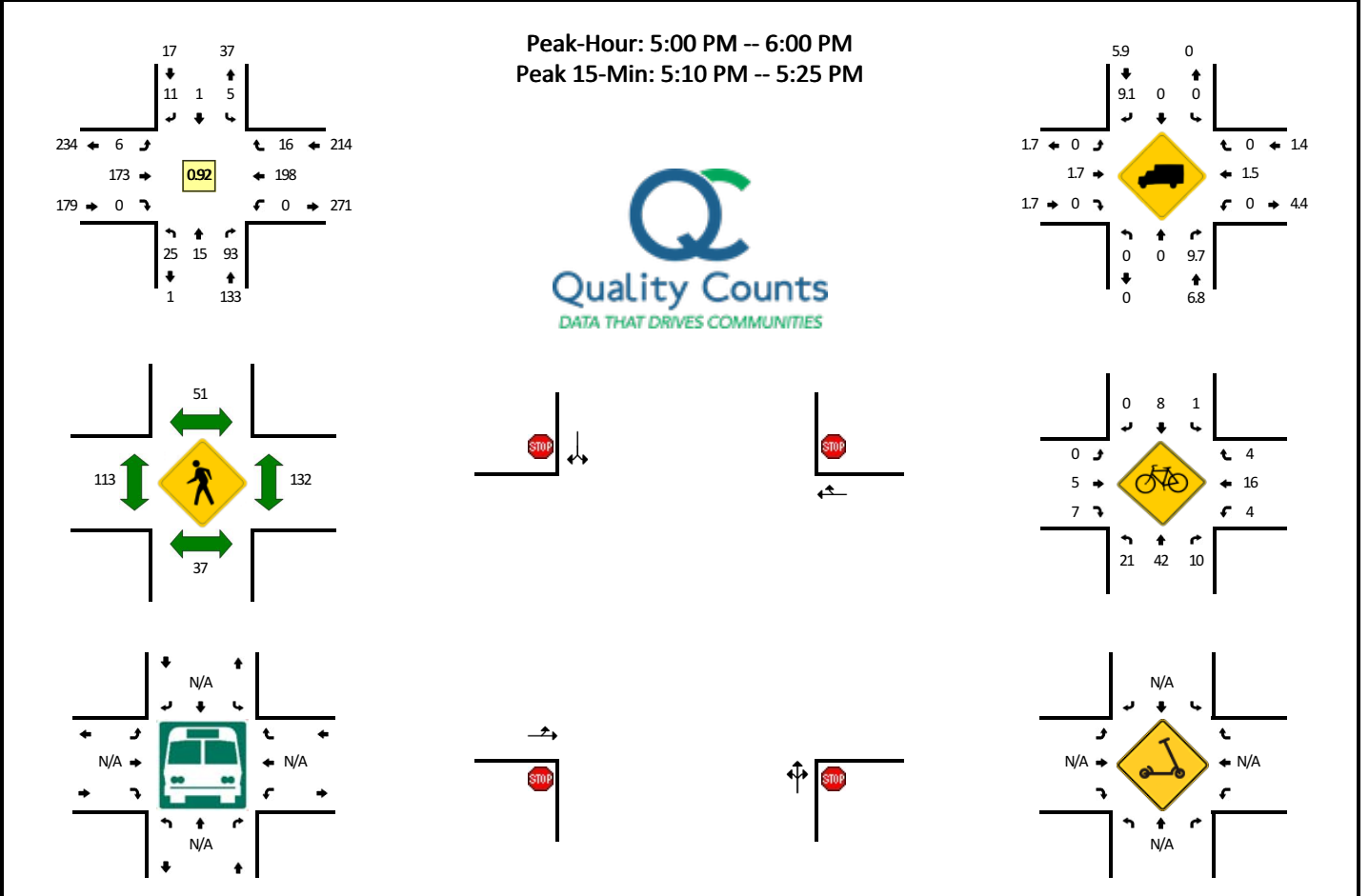


5-Min Count Period Beginning At	5 - NW 30th St (Northbound)				5 - NW 30th St (Southbound)				NW Orchard Ave (Eastbound)				NW Orchard Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	2	24	1	0	1	16	2	0	1	3	1	0	0	0	0	0	51	
5:05 PM	1	19	4	0	0	13	2	0	0	3	1	0	1	0	0	0	44	
5:10 PM	1	21	3	0	1	12	0	0	2	1	0	0	0	0	0	0	41	
5:15 PM	0	22	2	0	0	17	2	0	3	3	1	0	1	1	1	0	53	
5:20 PM	0	21	0	0	0	15	2	0	5	3	5	0	4	1	1	0	57	
5:25 PM	0	21	2	0	0	14	2	0	1	0	1	0	0	0	1	0	42	
5:30 PM	0	11	3	0	1	11	0	0	0	1	1	0	0	0	0	0	28	
5:35 PM	0	22	1	0	2	13	3	0	0	3	1	0	1	1	0	0	47	
5:40 PM	0	22	6	0	1	16	0	0	1	0	0	0	1	0	0	0	47	
5:45 PM	1	18	1	0	1	13	0	0	0	2	1	0	0	0	1	0	38	
5:50 PM	0	20	0	0	2	16	3	0	1	1	2	0	0	1	0	0	46	
5:55 PM	2	20	2	0	0	19	0	0	1	2	1	0	1	0	0	0	48	542
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	256	16	0	0	184	24	0	36	24	28	0	20	8	12	0	608	
Heavy Trucks Buses	0	0	0		0	0	0		0	0	0		0	0	0		0	
Pedestrians		68				16				44				56			184	
Bicycles	0	12	4		0	4	0		0	0	0		0	0	0		20	
Scooters																		

*Comments:*

**LOCATION:** 6 - SW 26th St -- NW Arnold Way/NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543996  
**DATE:** Tue, Oct 19 2021



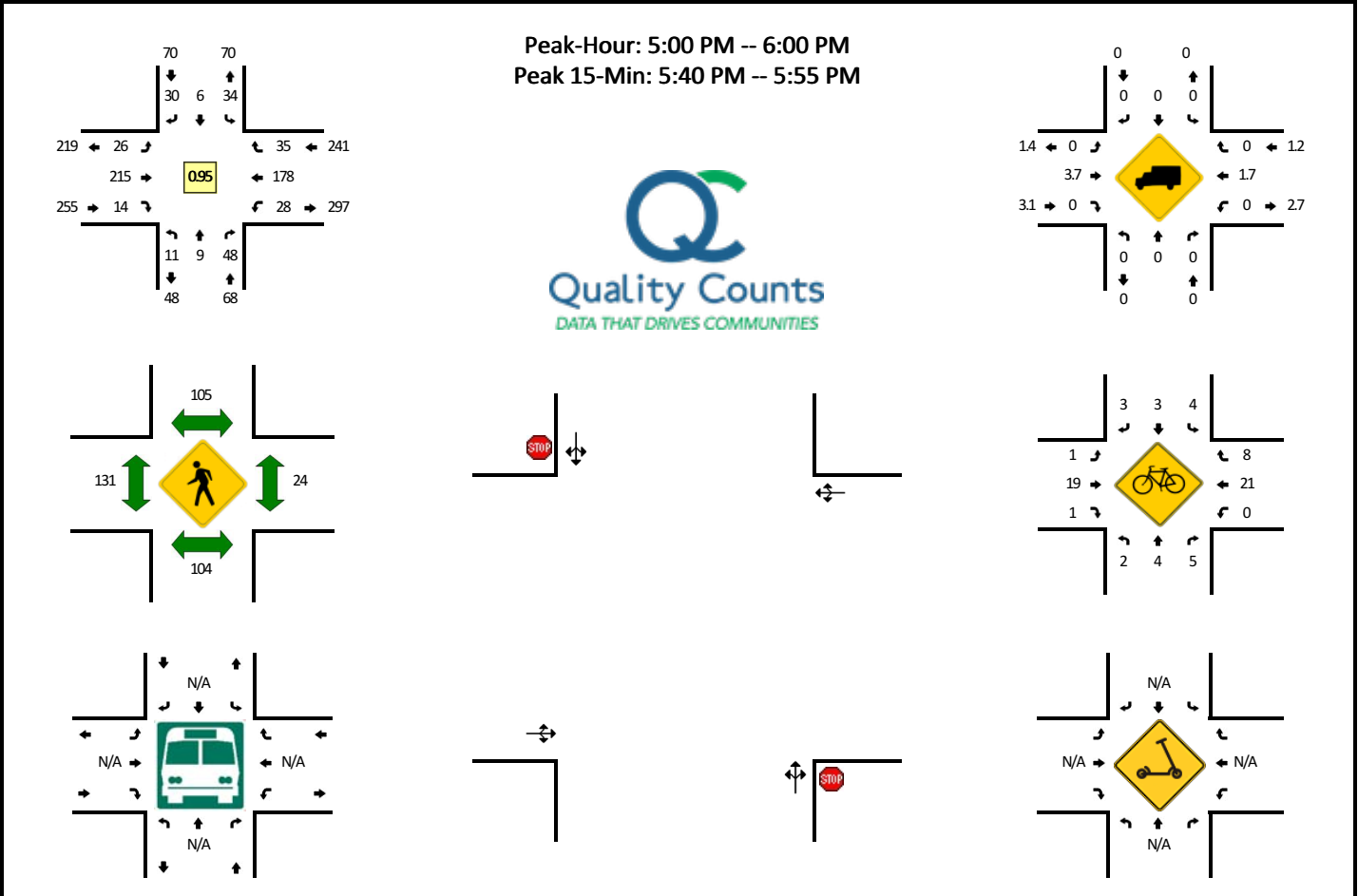
5-Min Count Period Beginning At	6 - SW 26th St (Northbound)				6 - SW 26th St (Southbound)				NW Arnold Way/NW Monroe Ave (Eastbound)				NW Arnold Way/NW Monroe Ave (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
5:00 PM	3	2	2	0	0	0	0	0	0	17	0	0	0	11	0	0	0	35	
5:05 PM	1	1	7	0	0	0	0	0	0	11	0	0	0	17	1	0	0	38	
5:10 PM	3	0	13	0	0	0	0	0	0	10	0	0	0	14	2	0	0	42	
5:15 PM	1	1	16	0	1	0	3	0	1	13	0	0	0	18	0	0	0	54	
5:20 PM	4	3	13	0	0	0	1	0	1	15	0	0	0	15	0	0	0	52	
5:25 PM	2	0	5	0	1	0	0	0	0	15	0	0	0	14	1	0	0	38	
5:30 PM	2	3	7	0	0	0	4	0	2	8	0	0	0	22	2	0	0	50	
5:35 PM	2	2	13	0	0	0	0	0	0	14	0	0	0	15	1	0	0	47	
5:40 PM	2	1	4	0	1	0	2	0	1	17	0	0	0	17	4	0	0	49	
5:45 PM	3	0	5	0	1	1	0	0	0	19	0	0	0	18	2	0	0	49	
5:50 PM	1	0	2	0	0	0	0	0	0	19	0	0	0	20	2	0	0	44	
5:55 PM	1	2	6	0	1	0	1	0	1	15	0	0	0	17	1	0	0	45	543

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	32	16	168	0	4	0	16	0	8	152	0	0	0	188	8	0	0	592
Heavy Trucks	0	0	8		0	0	4		0	4	0		0	0	0			16
Buses																		
Pedestrians		20				64				128				112				324
Bicycles	12	76	24		0	8	0		0	12	4		4	24	8			172
Scoters																		

Comments:

**LOCATION:** 7 - NW 25th St/SW Park Terrace Pl -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543998  
**DATE:** Tue, Oct 19 2021



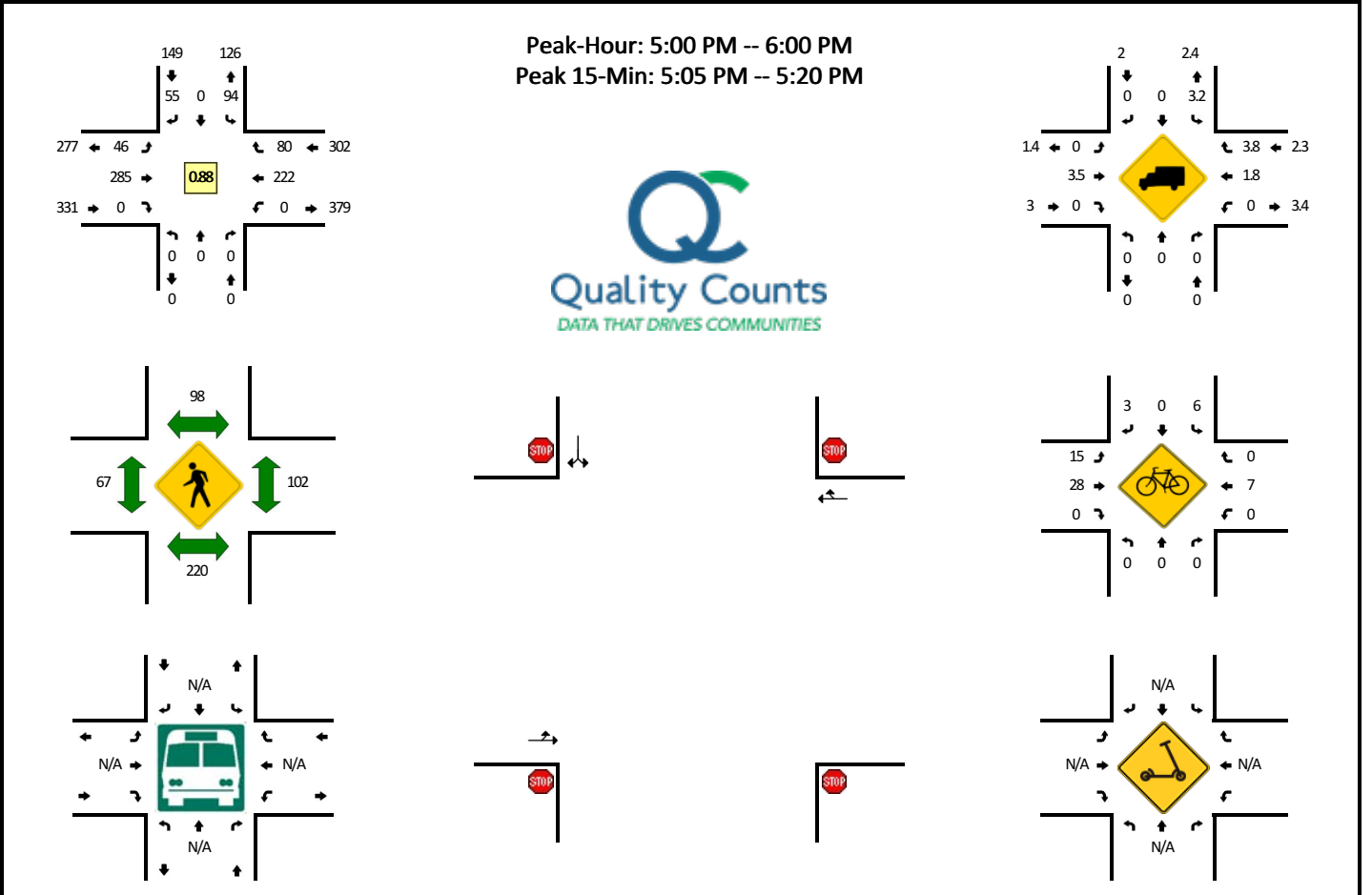
5-Min Count Period Beginning At	7 - NW 25th St/SW Park Terrace Pl (Northbound)				7 - NW 25th St/SW Park Terrace Pl (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	2	1	6	0	4	0	2	0	1	17	1	0	1	10	4	0	49	
5:05 PM	1	3	9	0	3	0	4	0	0	19	0	0	3	13	3	0	58	
5:10 PM	2	1	4	0	2	1	1	0	2	21	1	0	1	10	0	0	46	
5:15 PM	0	0	5	0	2	0	4	0	0	28	0	0	3	16	1	0	59	
5:20 PM	0	0	4	0	3	0	1	0	5	22	2	0	3	18	0	0	58	
5:25 PM	1	0	3	0	3	0	2	0	0	18	1	0	1	12	2	0	43	
5:30 PM	2	1	3	0	1	0	5	0	2	12	0	0	2	19	3	0	50	
5:35 PM	2	0	2	0	6	2	1	0	3	14	1	0	3	13	5	0	52	
5:40 PM	0	1	6	0	1	0	2	0	3	15	2	0	3	18	4	0	55	
5:45 PM	0	0	1	0	4	1	3	0	5	18	2	0	2	16	3	0	55	
5:50 PM	0	2	1	0	3	1	1	0	3	13	2	0	4	23	3	0	56	
5:55 PM	1	0	4	0	2	1	4	0	2	18	2	0	2	10	7	0	53	634
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	12	32	0	32	8	24	0	44	184	24	0	36	228	40	0	664	
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	0	0		12	
Buses																		
Pedestrians		64				80				124				16			284	
Bicycles	0	0	8		4	8	4		0	20	4		0	16	16		80	
Scoters																		

Comments:



**LOCATION:** 8 - NW Kings Blvd -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439100  
**DATE:** Tue, Oct 26 2021

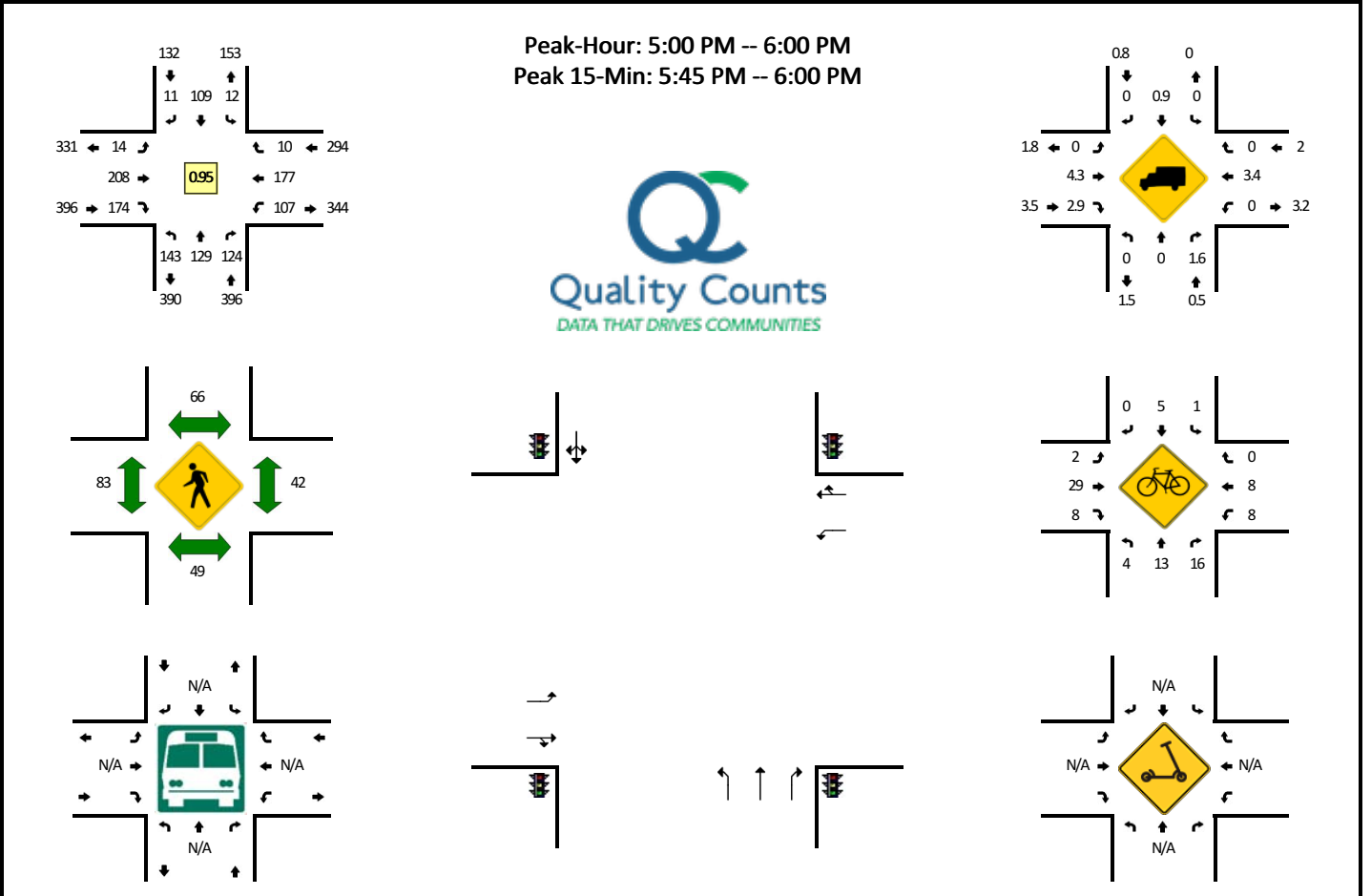


5-Min Count Period Beginning At	8 - NW Kings Blvd (Northbound)				8 - NW Kings Blvd (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	0	0	0	6	0	4	0	3	26	0	0	0	23	5	0	67	
5:05 PM	0	0	0	0	6	0	5	0	6	25	0	0	0	23	7	0	72	
5:10 PM	0	0	0	0	10	0	4	0	2	32	0	0	0	23	9	0	80	
5:15 PM	0	0	0	0	8	0	5	0	3	32	0	0	0	16	6	0	70	
5:20 PM	0	0	0	0	4	0	5	0	3	32	0	0	0	18	6	0	68	
5:25 PM	0	0	0	0	3	0	5	0	11	25	0	0	0	15	3	0	62	
5:30 PM	0	0	0	0	9	0	4	0	8	24	0	0	0	18	7	0	70	
5:35 PM	0	0	0	0	14	0	2	0	2	17	0	0	0	18	9	0	62	
5:40 PM	0	0	0	0	8	0	5	0	2	10	0	0	0	17	5	0	47	
5:45 PM	0	0	0	0	10	0	8	0	3	23	0	0	0	11	6	0	61	
5:50 PM	0	0	0	0	6	0	5	0	1	21	0	0	0	19	8	0	60	
5:55 PM	0	0	0	0	10	0	3	0	2	18	0	0	0	21	9	0	63	782
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	96	0	56	0	44	356	0	0	0	248	88	0	888	
Heavy Trucks	0	0	0	0	4	0	0	0	0	16	0	0	0	4	4	0	28	
Buses																		
Pedestrians		164				84				56				104			408	
Bicycles	0	0	0		0	0	4		24	48	0		0	20	0		96	
Scoters																		

*Comments:*

**LOCATION:** 9 - NW 14th St -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543918  
**DATE:** Tue, Oct 19 2021

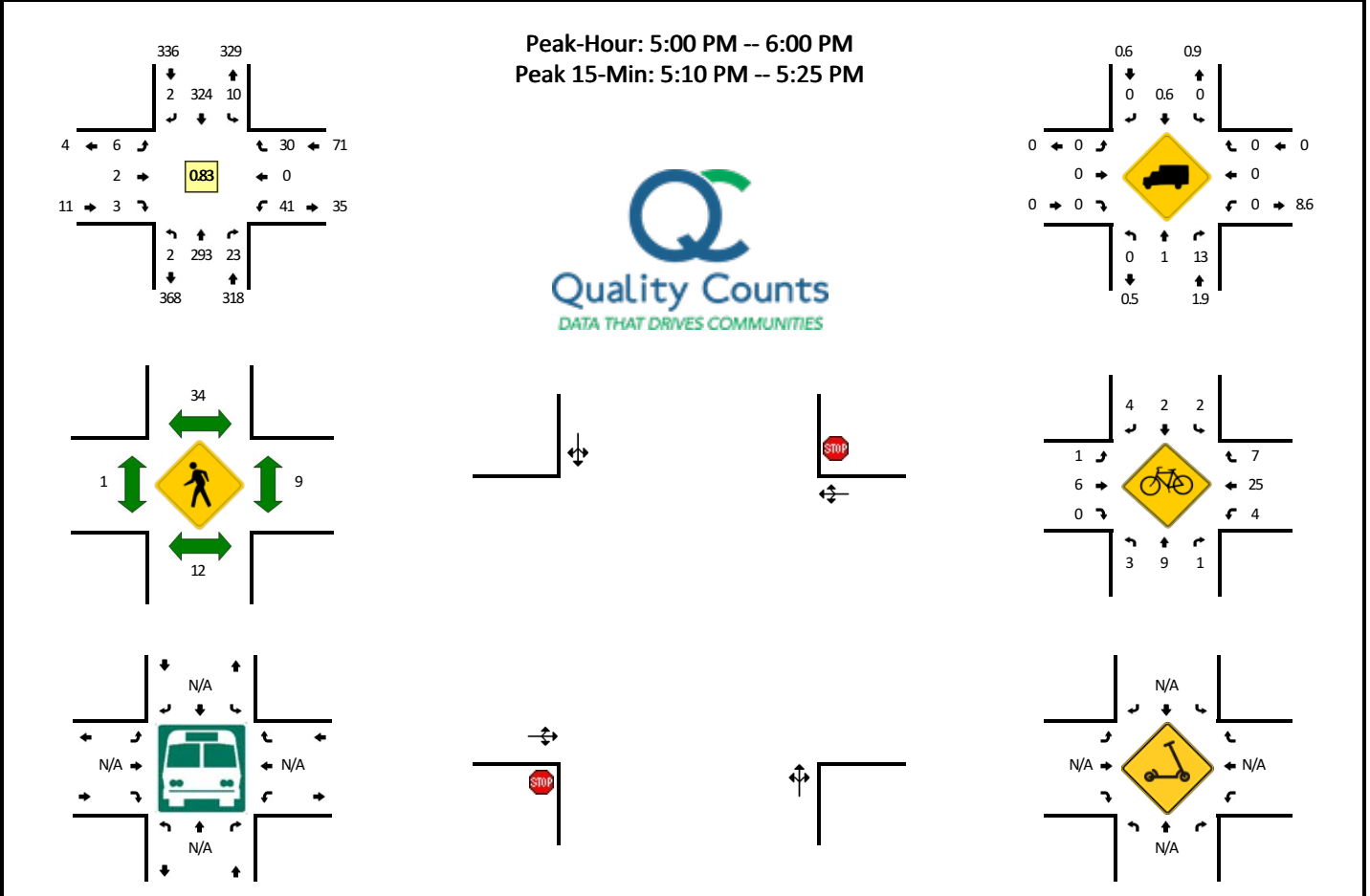


5-Min Count Period Beginning At	9 - NW 14th St (Northbound)				9 - NW 14th St (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	5	15	0	0	4	0	0	0	19	9	0	5	11	0	0	79	
4:05 PM	14	8	8	0	2	6	1	0	0	22	8	0	10	18	1	0	98	
4:10 PM	13	11	7	0	5	10	2	0	1	13	12	0	9	11	1	0	95	
4:15 PM	10	9	13	0	1	4	0	0	3	10	13	0	11	11	2	0	87	
4:20 PM	4	8	10	0	1	5	1	0	0	10	15	0	8	19	0	0	81	
4:25 PM	9	8	6	0	0	2	0	0	1	11	8	0	9	14	2	0	70	
4:30 PM	9	10	8	0	0	7	0	0	0	16	9	0	7	14	2	0	82	
4:35 PM	9	3	9	0	1	4	1	0	1	13	8	0	2	10	1	0	62	
4:40 PM	7	11	13	0	1	12	3	0	2	24	10	0	7	25	4	0	119	
4:45 PM	10	10	12	0	1	9	1	0	0	18	18	0	8	11	1	0	99	
4:50 PM	15	12	15	0	1	6	3	0	0	12	14	0	7	6	2	0	93	
4:55 PM	13	3	7	0	0	11	0	0	2	13	3	0	4	6	1	0	63	1028
5:00 PM	9	6	9	0	1	8	2	0	4	17	15	0	8	18	0	0	97	1046
5:05 PM	10	11	11	0	2	9	2	0	1	22	18	0	5	18	2	0	111	1059
5:10 PM	14	13	13	0	4	8	1	0	0	21	11	0	14	7	2	0	108	1072
5:15 PM	13	12	9	0	0	9	0	0	2	21	13	0	6	15	1	0	101	1086
5:20 PM	12	5	12	0	2	10	0	0	1	24	10	0	8	19	1	0	104	1109
5:25 PM	8	10	9	0	0	7	2	0	2	16	19	0	10	16	1	0	100	1139
5:30 PM	9	12	10	0	0	11	1	0	1	17	14	0	6	10	0	0	91	1148
5:35 PM	14	12	11	0	0	8	0	0	2	12	10	0	7	15	0	0	91	1177
5:40 PM	15	14	13	0	3	2	1	0	0	14	13	0	7	12	0	0	94	1152
5:45 PM	12	11	9	0	0	13	1	0	1	21	14	0	8	19	0	0	109	1162
5:50 PM	11	7	7	0	0	14	1	0	0	14	14	0	11	16	3	0	98	1167
5:55 PM	16	16	11	0	0	10	0	0	0	9	23	0	17	12	0	0	114	1218
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	156	136	108	0	0	148	8	0	4	176	204	0	144	188	12	0	1284	
Heavy Trucks	0	0	0		0	0	0		0	12	8		0	4	0		24	
Buses																		
Pedestrians		56				72				72				28			228	
Bicycles	4	12	8		0	4	0		4	28	8		4	8	0		80	
Scooters																		

Comments:

**LOCATION:** 10 - SW 35th St -- SW Campus Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439102  
**DATE:** Tue, Oct 19 2021

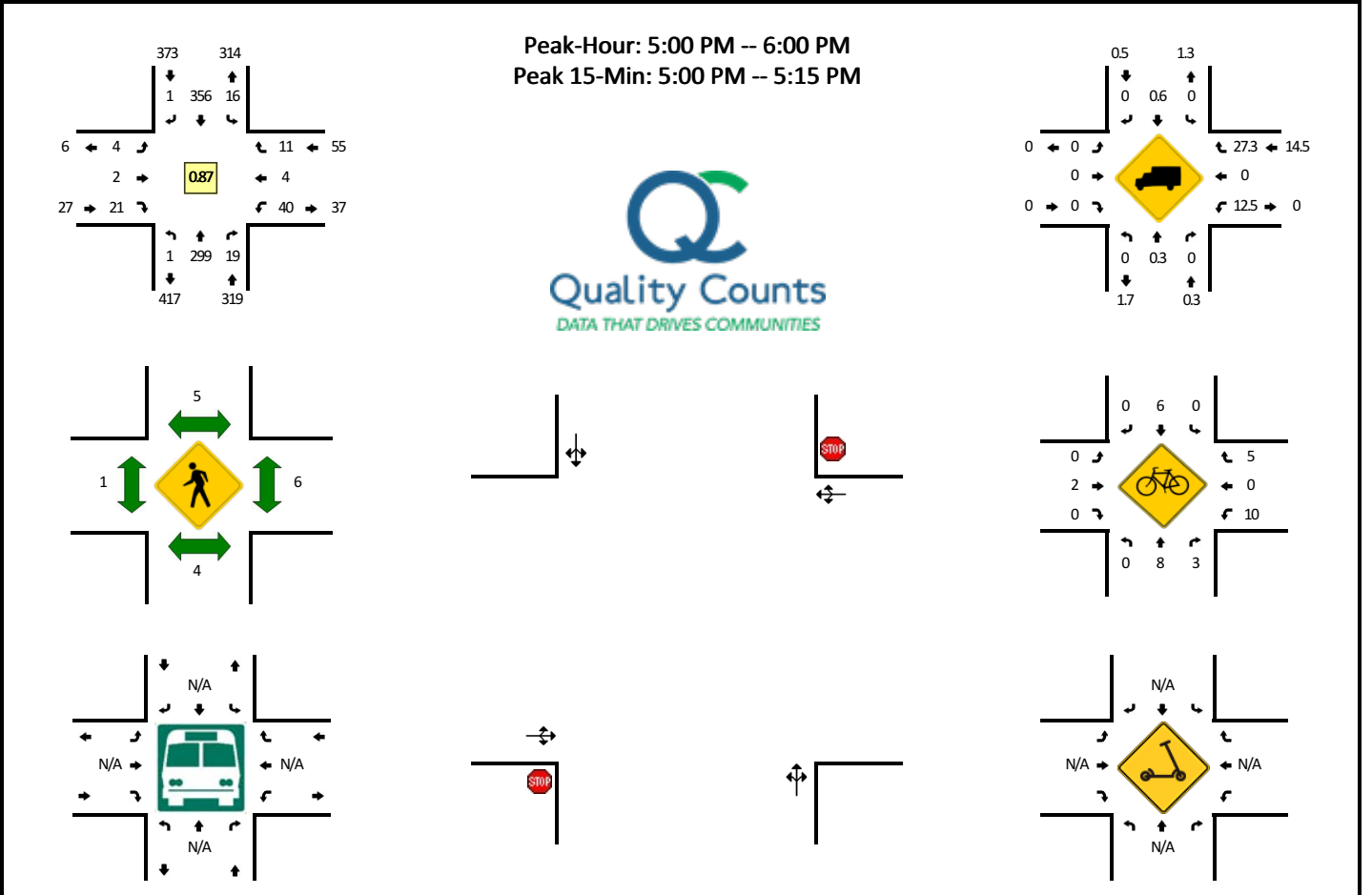


5-Min Count Period Beginning At	10 - SW 35th St (Northbound)				10 - SW 35th St (Southbound)				SW Campus Way (Eastbound)				SW Campus Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	1	18	5	0	0	40	0	0	1	0	0	0	4	0	8	0	77	
5:05 PM	0	34	3	0	2	26	0	0	0	0	0	0	0	0	0	0	65	
5:10 PM	0	29	0	0	0	27	1	0	1	0	0	0	8	0	5	0	71	
5:15 PM	0	29	4	0	1	28	0	0	1	1	1	0	2	0	3	0	70	
5:20 PM	1	30	2	0	2	35	0	0	1	0	1	0	5	0	4	0	81	
5:25 PM	0	18	0	0	0	20	0	0	1	0	0	0	7	0	3	0	49	
5:30 PM	0	27	1	0	1	25	0	0	0	0	1	0	6	0	4	0	65	
5:35 PM	0	22	2	0	1	17	0	0	0	0	0	0	2	0	2	0	46	
5:40 PM	0	27	2	0	1	20	0	0	0	1	0	0	2	0	0	0	53	
5:45 PM	0	20	2	0	0	27	0	0	0	0	0	0	1	0	0	0	50	
5:50 PM	0	16	0	0	1	33	1	0	0	0	0	0	4	0	0	0	55	
5:55 PM	0	23	2	0	1	26	0	0	1	0	0	0	0	0	1	0	54	736
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	352	24	0	12	360	4	0	12	4	8	0	60	0	48	0	888	
Heavy Trucks	0	4	4		0	0	0		0	0	0		0	0	0		8	
Buses																		
Pedestrians		12				64				0				24			100	
Bicycles	0	16	0		4	0	8		4	8	0		4	24	8		76	
Scoters																		

*Comments:*

**LOCATION:** 11 - SW 35th St -- SW Jefferson Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439104  
**DATE:** Tue, Oct 19 2021

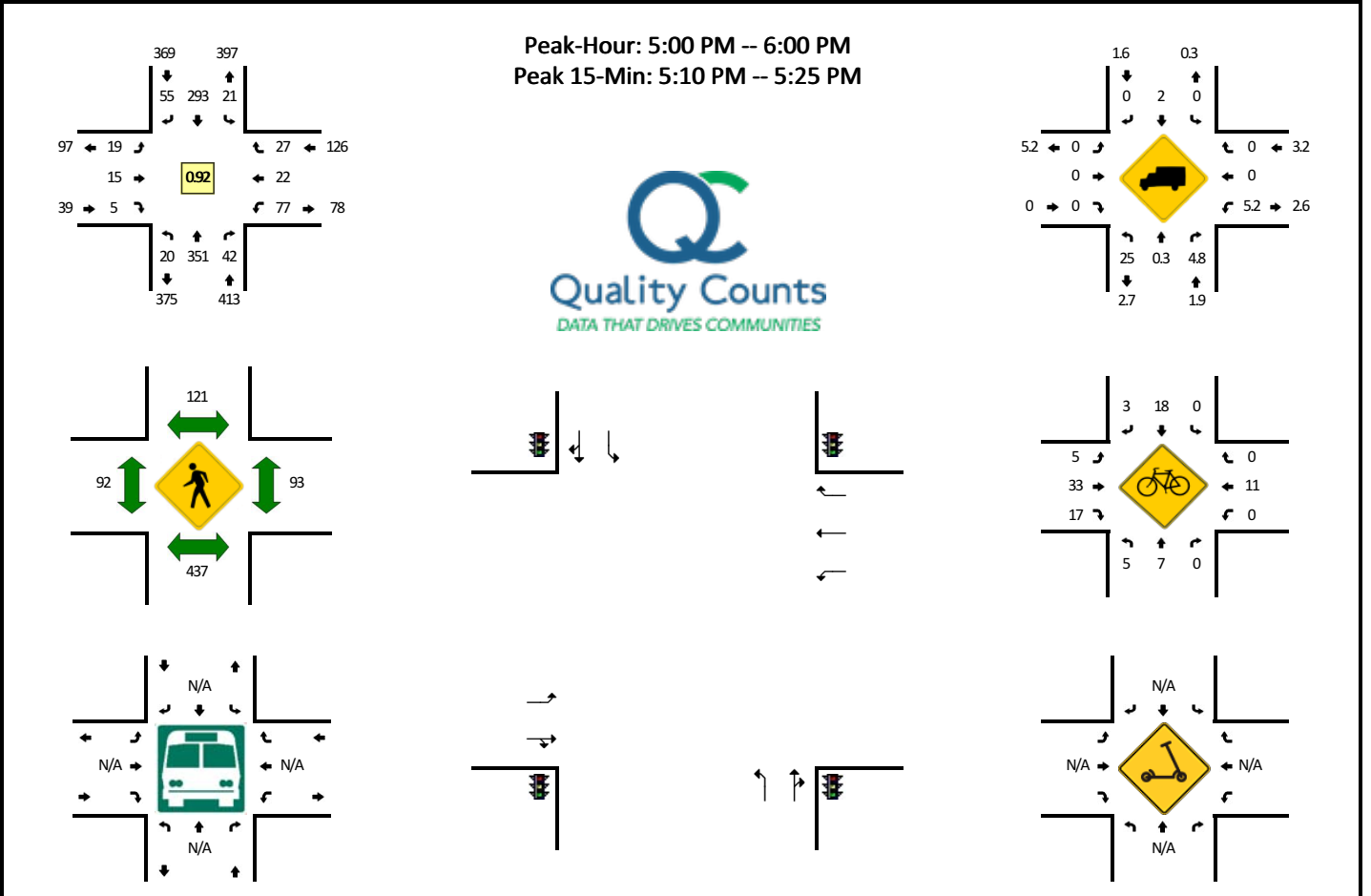


5-Min Count Period Beginning At	11 - SW 35th St (Northbound)				11 - SW 35th St (Southbound)				SW Jefferson Way (Eastbound)				SW Jefferson Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	21	1	0	3	41	0	0	2	0	2	0	5	1	1	0	77	
5:05 PM	0	38	1	0	0	28	0	0	0	0	6	0	7	0	2	0	82	
5:10 PM	1	22	1	0	0	31	0	0	0	1	1	0	3	1	2	0	63	
5:15 PM	0	35	1	0	1	32	0	0	0	0	3	0	3	0	0	0	75	
5:20 PM	0	28	1	0	4	38	0	0	1	0	1	0	4	0	1	0	78	
5:25 PM	0	17	4	0	0	28	0	0	0	0	0	0	4	0	2	0	55	
5:30 PM	0	28	1	0	0	32	0	0	0	0	1	0	6	0	0	0	68	
5:35 PM	0	21	0	0	1	21	0	0	0	1	2	0	2	0	1	0	49	
5:40 PM	0	29	4	0	1	17	0	0	0	0	1	0	1	1	1	0	55	
5:45 PM	0	20	3	0	1	30	1	0	0	0	1	0	0	0	0	0	56	
5:50 PM	0	16	1	0	3	34	0	0	1	0	2	0	2	1	0	0	60	
5:55 PM	0	24	1	0	2	24	0	0	0	0	1	0	3	0	1	0	56	774
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	324	12	0	12	400	0	0	8	4	36	0	60	8	20	0	888	
Heavy Trucks	0	4	0	0	0	4	0	0	0	0	0	0	4	0	4	0	16	
Buses																		
Pedestrians		8				0				0				8			16	
Bicycles	0	16	0		0	8	0		0	4	0		12	0	8		48	
Scoters																		

*Comments:*

**LOCATION:** 12 - SW 14th St/SW 15th St -- SW Jefferson Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543955  
**DATE:** Tue, Oct 19 2021

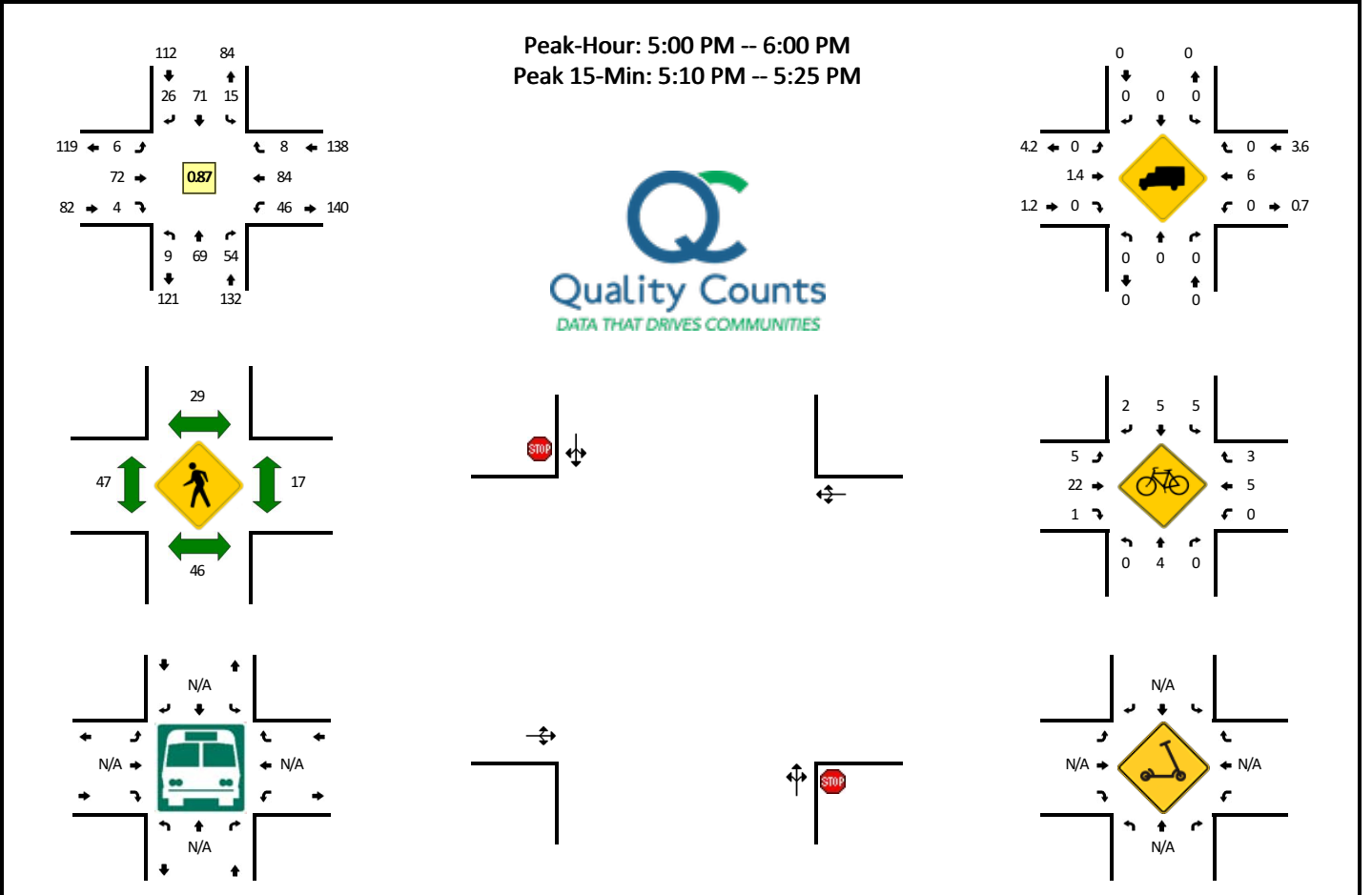


5-Min Count Period Beginning At	12 - SW 14th St/SW 15th St (Northbound)				12 - SW 14th St/SW 15th St (Southbound)				SW Jefferson Way (Eastbound)				SW Jefferson Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	28	3	0	0	16	5	0	3	1	0	0	5	1	2	0	65	
4:05 PM	0	28	3	0	2	17	4	0	3	0	0	0	1	4	2	0	64	
4:10 PM	1	24	10	0	0	27	7	0	1	3	3	0	3	0	0	0	79	
4:15 PM	1	27	1	0	0	24	6	0	1	1	2	0	3	0	1	0	67	
4:20 PM	0	18	1	0	2	19	7	0	0	0	1	0	5	1	2	0	56	
4:25 PM	1	23	2	0	0	18	1	0	0	0	0	0	2	2	3	0	52	
4:30 PM	0	25	4	0	5	15	1	0	0	1	0	0	1	3	0	0	55	
4:35 PM	2	24	2	0	0	11	4	0	1	3	0	0	1	0	2	0	50	
4:40 PM	0	23	6	0	2	17	6	0	3	2	0	0	3	2	2	0	66	
4:45 PM	1	32	2	0	2	31	4	0	4	1	0	0	3	1	3	0	84	
4:50 PM	4	29	3	0	0	14	4	0	1	1	0	0	4	1	2	0	63	
4:55 PM	1	21	6	0	1	18	3	0	1	1	1	0	6	2	2	0	63	764
5:00 PM	3	18	4	0	1	23	6	0	1	1	0	0	0	2	1	0	60	759
5:05 PM	0	31	5	0	3	18	3	0	3	2	1	0	4	1	2	0	73	768
5:10 PM	2	37	7	0	4	26	2	0	4	2	0	0	10	2	2	0	98	787
5:15 PM	3	24	5	0	4	25	4	0	4	1	0	0	5	2	2	0	79	799
5:20 PM	1	24	7	0	0	21	5	0	1	3	2	0	11	1	5	0	81	824
5:25 PM	2	31	1	0	0	27	2	0	0	0	0	0	8	3	1	0	75	847
5:30 PM	0	25	2	0	2	29	4	0	1	2	1	0	6	4	3	0	79	871
5:35 PM	1	33	3	0	1	24	1	0	0	1	0	0	8	1	3	0	76	897
5:40 PM	0	31	3	0	0	19	5	0	2	3	0	0	7	2	1	0	73	904
5:45 PM	2	30	1	0	2	22	8	0	1	0	0	0	7	1	2	0	76	896
5:50 PM	1	31	3	0	2	26	6	0	2	0	0	0	6	1	2	0	80	913
5:55 PM	5	36	1	0	2	33	9	0	0	0	1	0	5	2	3	0	97	947
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	24	340	76	0	32	288	44	0	36	24	8	0	104	20	36	0	1032	
Heavy Trucks	4	0	4		0	4	0		0	0	0		4	0	0		16	
Buses																		
Pedestrians		332				120				92				84			628	
Bicycles	8	8	0		0	24	4		16	40	24		0	12	0		136	
Scoters																		

*Comments:*

**LOCATION:** 13 - SW 11th St -- SW Jefferson Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439106  
**DATE:** Tue, Oct 19 2021

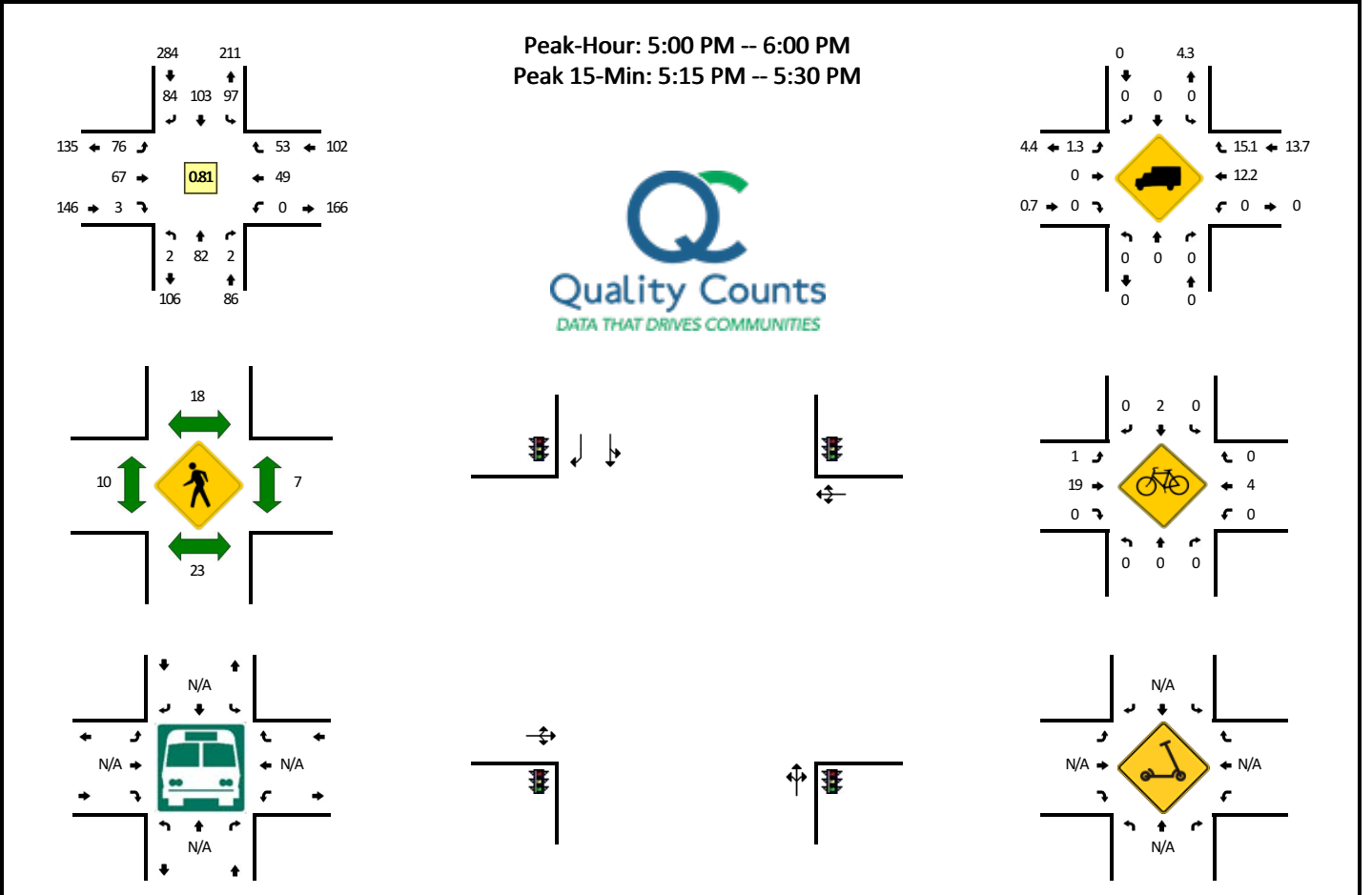


5-Min Count Period Beginning At	13 - SW 11th St (Northbound)				13 - SW 11th St (Southbound)				SW Jefferson Ave (Eastbound)				SW Jefferson Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	1	4	4	0	2	5	3	0	0	4	1	0	5	3	2	0	34	
5:05 PM	1	10	5	0	0	7	0	1	0	5	1	0	6	6	1	0	43	
5:10 PM	1	4	2	0	3	4	3	0	1	6	1	0	5	7	1	0	38	
5:15 PM	1	7	3	0	0	8	2	0	1	12	0	0	5	7	0	0	46	
5:20 PM	2	8	5	0	2	8	3	0	1	6	0	0	3	11	0	0	49	
5:25 PM	0	6	3	0	3	8	4	0	1	6	0	0	1	6	0	0	38	
5:30 PM	0	7	6	0	0	6	1	0	1	7	0	0	4	9	1	0	42	
5:35 PM	2	2	5	0	3	4	2	0	1	7	0	0	5	8	1	0	40	
5:40 PM	0	4	6	0	0	6	2	0	0	8	0	0	3	9	0	0	38	
5:45 PM	1	5	6	0	0	4	3	0	0	2	1	0	2	5	0	0	29	
5:50 PM	0	7	7	0	0	6	1	0	0	6	0	0	3	7	2	0	39	
5:55 PM	0	5	2	0	1	5	2	0	0	3	0	0	4	6	0	0	28	464
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	76	40	0	20	80	32	0	12	96	4	0	52	100	4	0	532	
Heavy Trucks Buses	0	0	0		0	0	0		0	0	0		0	4	0		4	
Pedestrians		36				44				40				32			152	
Bicycles	0	4	0		4	8	4		4	32	0		0	4	4		64	
Scoters																		

*Comments:*

**LOCATION:** 14 - SW 9th St -- SW Jefferson Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439108  
**DATE:** Tue, Oct 19 2021

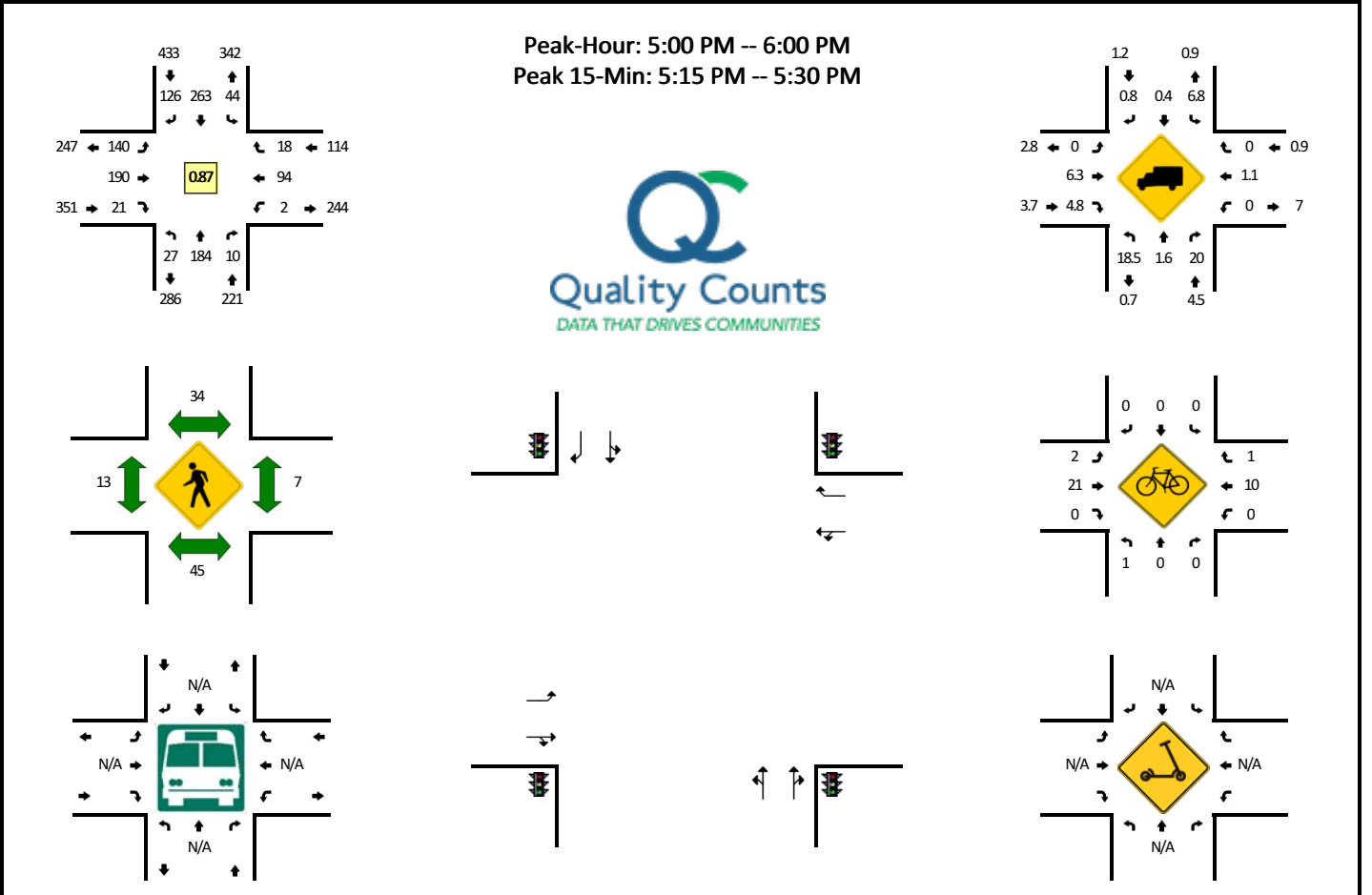


5-Min Count Period Beginning At	14 - SW 9th St (Northbound)				14 - SW 9th St (Southbound)				SW Jefferson Ave (Eastbound)				SW Jefferson Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	6	0	0	3	9	5	0	6	1	0	0	0	4	3	0	37	
5:05 PM	0	6	1	0	12	7	12	0	6	5	2	0	0	4	4	0	59	
5:10 PM	0	5	0	0	6	5	9	0	2	7	0	0	0	3	2	0	39	
5:15 PM	0	11	0	0	14	6	6	0	6	9	0	0	0	5	5	0	62	
5:20 PM	1	7	0	0	18	13	7	0	7	10	0	0	0	7	3	0	73	
5:25 PM	0	14	0	0	4	11	6	0	8	7	1	0	0	3	1	0	55	
5:30 PM	0	3	0	0	5	11	6	0	6	5	0	0	0	7	6	0	49	
5:35 PM	0	8	0	0	8	11	10	0	6	10	0	0	0	2	3	0	58	
5:40 PM	0	9	0	0	9	7	6	0	5	7	0	0	0	6	3	0	52	
5:45 PM	0	5	0	0	4	7	7	0	9	0	0	0	0	2	7	0	41	
5:50 PM	1	4	1	0	6	8	5	0	11	3	0	0	0	3	10	0	52	
5:55 PM	0	4	0	0	8	8	5	0	4	3	0	0	0	3	6	0	41	618
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	128	0	0	144	120	76	0	84	104	4	0	0	60	36	0	760	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	0	12	
Buses																		
Pedestrians		28				4				4				4			40	
Bicycles	0	0	0		0	0	0		0	24	0		0	0	0		24	
Scooters																		

*Comments:*

**LOCATION:** 15 - SW 9th St -- NW Monroe Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439110  
**DATE:** Tue, Oct 19 2021



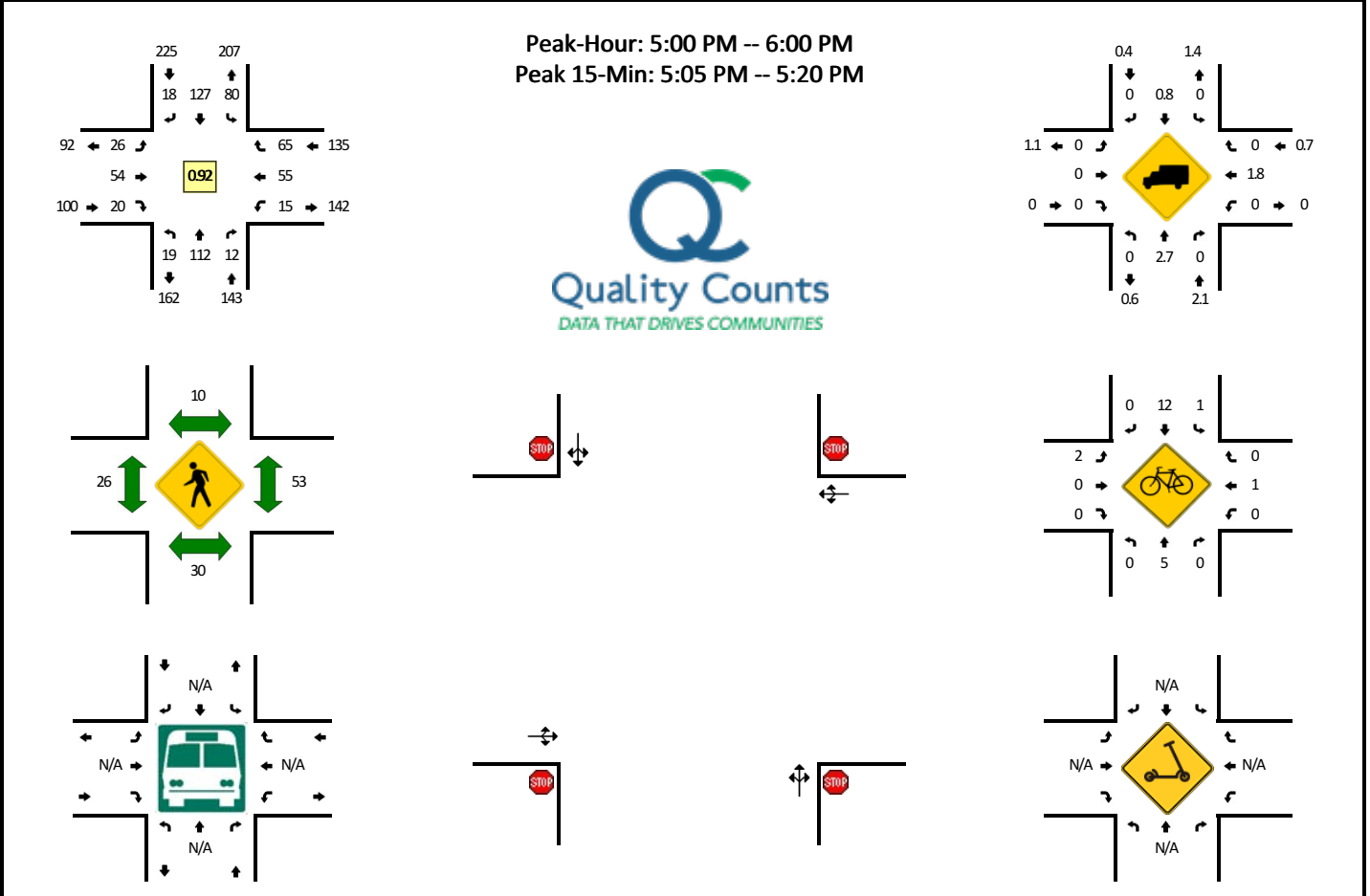
5-Min Count Period Beginning At	15 - SW 9th St (Northbound)				15 - SW 9th St (Southbound)				NW Monroe Ave (Eastbound)				NW Monroe Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	1	10	0	0	1	14	14	0	12	15	2	0	0	11	2	0	82	
5:05 PM	2	17	0	0	2	30	6	0	12	15	3	0	0	9	1	0	97	
5:10 PM	2	9	3	0	7	21	13	0	19	19	0	0	0	4	1	0	98	
5:15 PM	1	18	1	0	6	20	14	0	11	18	1	0	0	9	3	0	102	
5:20 PM	3	15	0	0	3	35	11	0	17	21	2	0	0	9	2	0	118	
5:25 PM	3	21	1	0	4	25	13	0	13	15	0	0	0	6	1	0	102	
5:30 PM	2	15	2	0	3	23	3	0	10	16	1	0	1	3	4	0	83	
5:35 PM	3	14	1	0	5	21	10	0	9	14	6	0	0	7	2	0	92	
5:40 PM	3	12	1	0	3	19	10	0	14	13	1	0	0	11	0	0	87	
5:45 PM	2	21	0	0	3	22	6	0	9	20	2	0	0	8	0	0	93	
5:50 PM	4	17	0	0	4	14	9	0	6	12	2	0	0	12	2	0	82	
5:55 PM	1	15	1	0	3	19	17	0	8	12	1	0	1	5	0	0	83	1119
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	28	216	8	0	52	320	152	0	164	216	12	0	0	96	24	0	1288	
Heavy Trucks	4	0	0	0	4	0	0	0	0	8	0	0	0	4	0	0	20	
Buses																		
Pedestrians		52				28				4				8			92	
Bicycles	0	0	0		0	0	0		0	28	0		0	16	0		44	
Scoters																		

*Comments:*



**LOCATION:** 16 - SW 30th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439112  
**DATE:** Tue, Oct 19 2021

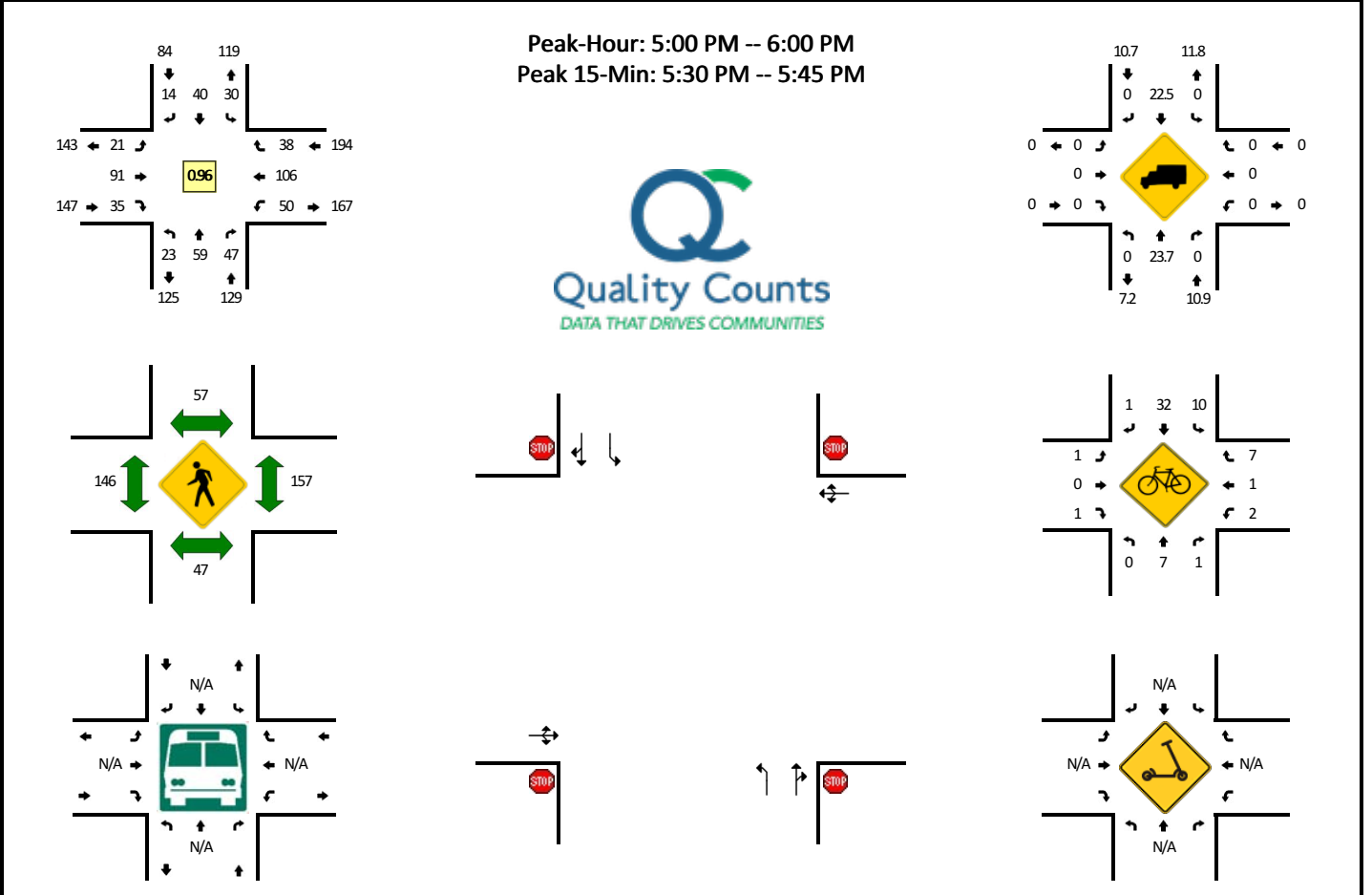


5-Min Count Period Beginning At	16 - SW 30th St (Northbound)				16 - SW 30th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	2	10	1	0	5	7	4	0	0	5	4	0	0	4	3	0	45	
5:05 PM	2	13	1	0	5	14	3	0	1	6	7	0	3	2	3	0	60	
5:10 PM	0	10	1	0	4	17	0	0	1	8	0	0	0	5	6	0	52	
5:15 PM	3	10	1	0	9	8	0	2	2	3	0	0	3	7	4	0	52	
5:20 PM	2	4	2	0	8	9	3	0	4	3	1	0	1	6	5	0	48	
5:25 PM	3	7	1	0	9	15	3	0	2	2	1	0	2	5	6	0	56	
5:30 PM	3	2	2	0	7	9	3	0	2	4	0	0	2	7	3	0	44	
5:35 PM	1	7	0	0	6	10	1	0	3	2	1	0	2	4	5	0	42	
5:40 PM	1	17	0	0	2	10	0	0	2	6	0	0	0	5	5	0	48	
5:45 PM	0	11	1	0	6	5	0	0	3	7	3	0	0	1	11	0	48	
5:50 PM	0	11	1	0	4	10	0	2	4	4	2	0	1	6	11	0	56	
5:55 PM	2	10	1	0	11	13	1	0	2	4	1	0	1	3	3	0	52	603
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	20	132	12	0	72	156	12	8	16	68	28	0	24	56	52	0	656	
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	4	0		12	
Buses																		
Pedestrians		28				4				44				52			128	
Bicycles	0	12	0		4	8	0		4	0	0		0	0	0		28	
Scooters																		

Comments:

**LOCATION:** 17 - SW 26th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543932  
**DATE:** Tue, Oct 19 2021

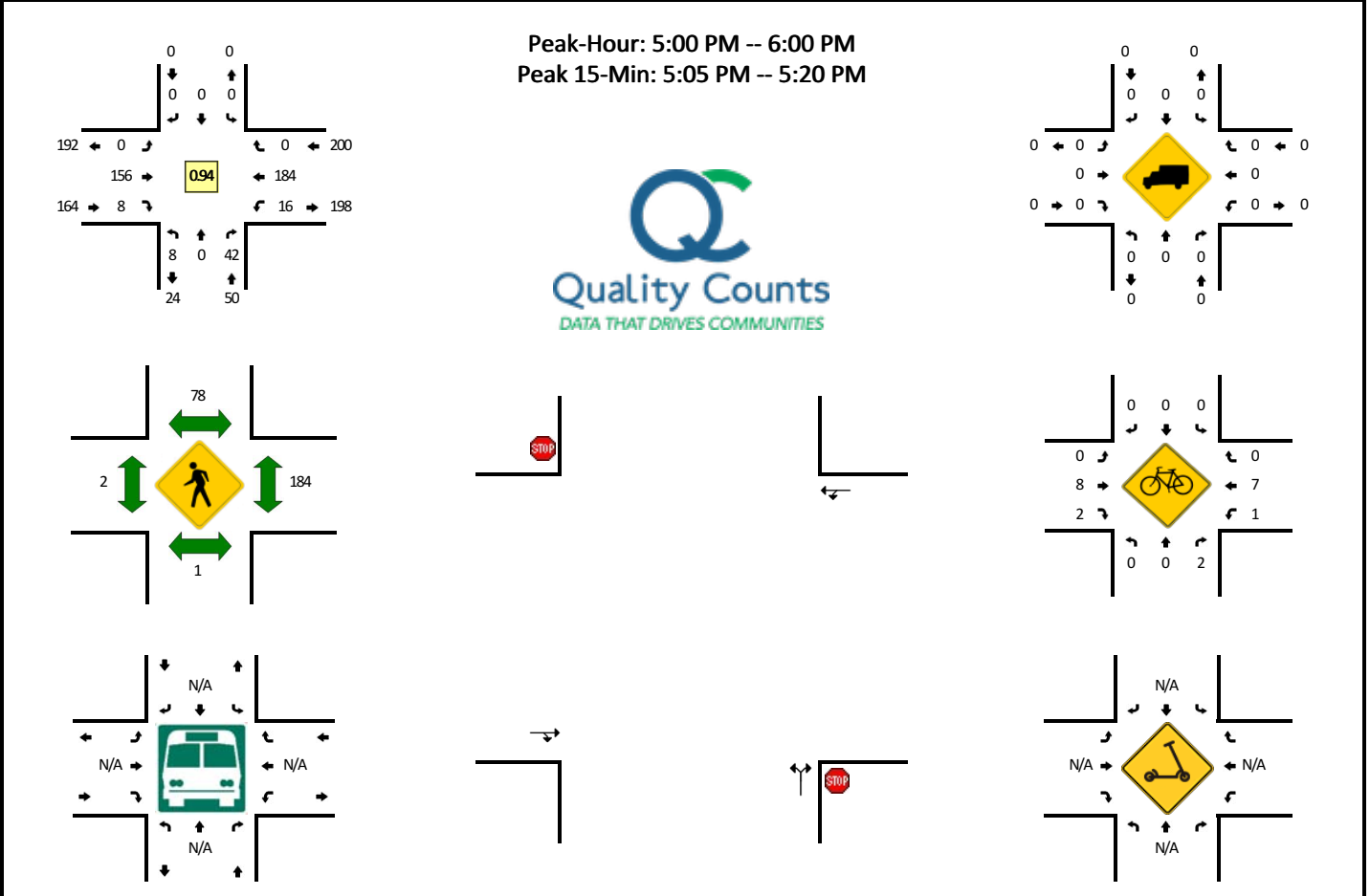


5-Min Count Period Beginning At	17 - SW 26th St (Northbound)				17 - SW 26th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	4	3	0	3	4	2	0	0	7	4	0	1	8	3	0	40	
4:05 PM	2	5	4	0	3	4	3	0	1	9	3	0	1	5	3	0	43	
4:10 PM	4	1	1	0	2	4	1	0	1	6	3	0	0	4	3	0	30	
4:15 PM	3	4	1	0	1	3	0	0	0	7	1	0	4	3	4	0	31	
4:20 PM	1	1	1	0	3	2	3	0	2	1	2	0	4	6	7	0	33	
4:25 PM	1	4	2	0	2	1	3	0	2	5	2	0	2	5	3	0	32	
4:30 PM	0	2	2	0	2	8	2	0	2	7	4	0	5	7	3	0	44	
4:35 PM	1	4	2	1	3	2	1	0	3	8	5	0	2	5	3	0	40	
4:40 PM	1	3	4	0	3	4	1	0	0	3	1	0	2	6	2	0	30	
4:45 PM	1	2	3	1	5	3	0	0	2	12	2	0	4	7	1	0	43	
4:50 PM	3	4	4	0	8	0	3	0	1	9	3	0	5	3	4	0	47	
4:55 PM	0	3	3	0	2	4	0	0	3	7	2	0	2	4	3	0	33	446
5:00 PM	1	7	5	0	1	5	0	0	2	6	2	0	3	6	3	0	41	447
5:05 PM	1	5	6	0	2	2	0	0	1	11	1	0	1	9	1	0	40	444
5:10 PM	3	5	0	0	5	4	0	0	3	10	1	0	3	7	3	0	44	458
5:15 PM	3	3	6	0	0	2	1	0	1	11	3	0	4	13	6	0	53	480
5:20 PM	2	4	3	0	4	2	2	0	1	7	2	0	2	10	2	0	41	488
5:25 PM	3	4	3	0	1	1	3	0	3	3	6	0	8	7	3	0	45	501
5:30 PM	1	5	5	0	3	7	0	0	4	8	3	0	3	8	2	0	49	506
5:35 PM	1	4	6	0	4	4	2	0	1	7	4	0	3	10	2	0	48	514
5:40 PM	1	12	3	0	1	6	0	1	0	2	2	0	6	10	4	0	48	532
5:45 PM	3	0	3	0	3	2	3	0	2	12	2	0	5	8	2	0	45	534
5:50 PM	3	5	4	0	2	2	3	0	0	5	4	0	6	8	3	0	45	532
5:55 PM	1	5	3	0	3	3	0	0	3	9	5	0	6	10	7	0	55	554
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	12	84	56	0	32	68	8	4	20	68	36	0	48	112	32	0	580	
Heavy Trucks	0	24	0		0	12	0		0	0	0		0	0	0		36	
Buses																		
Pedestrians		56				44				120				156			376	
Bicycles	0	8	4		12	36	0		0	0	0		0	4	12		76	
Scoters																		

*Comments:*

**LOCATION:** 18 - SW 17th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439114  
**DATE:** Tue, Oct 19 2021

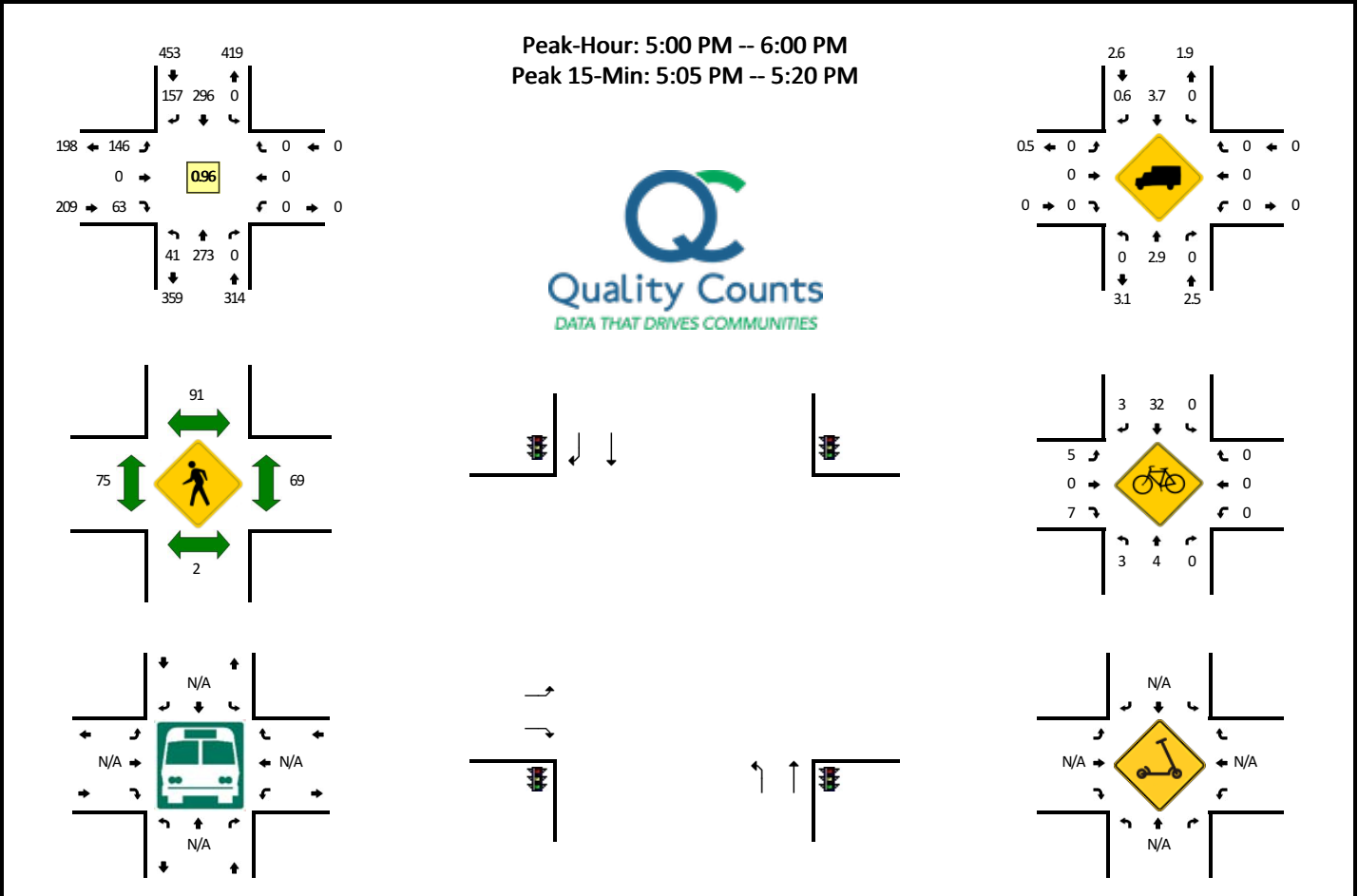


5-Min Count Period Beginning At	18 - SW 17th St (Northbound)				18 - SW 17th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	0	4	0	0	0	0	0	0	13	1	0	1	10	0	0	29	
5:05 PM	1	0	4	0	0	0	0	0	0	19	0	0	1	8	0	0	33	
5:10 PM	1	0	5	0	0	0	0	0	0	12	0	0	2	16	0	0	36	
5:15 PM	1	0	2	0	0	0	0	0	0	14	1	0	2	21	0	0	41	
5:20 PM	0	0	1	0	0	0	0	0	0	17	1	0	1	12	0	0	32	
5:25 PM	2	0	3	0	0	0	0	0	0	6	0	0	2	14	0	0	27	
5:30 PM	0	0	4	0	0	0	0	0	0	16	0	0	2	17	0	0	39	
5:35 PM	0	0	4	0	0	0	0	0	0	15	0	0	1	12	0	0	32	
5:40 PM	0	0	4	0	0	0	0	0	0	9	0	0	0	22	0	0	35	
5:45 PM	2	0	4	0	0	0	0	0	0	8	2	0	1	14	0	0	31	
5:50 PM	0	0	4	0	0	0	0	0	0	13	2	0	1	19	0	0	39	
5:55 PM	1	0	3	0	0	0	0	0	0	14	1	0	2	19	0	0	40	414
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	12	0	44	0	0	0	0	0	0	180	4	0	20	180	0	0	440	
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0	
Buses																		
Pedestrians		0				52				4				136			192	
Bicycles	0	0	0		0	0	0		0	4	4		4	0	0		12	
Scooters																		

*Comments:*

**LOCATION:** 19 - SW 15th St -- SW Washington Way  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543936  
**DATE:** Tue, Oct 19 2021

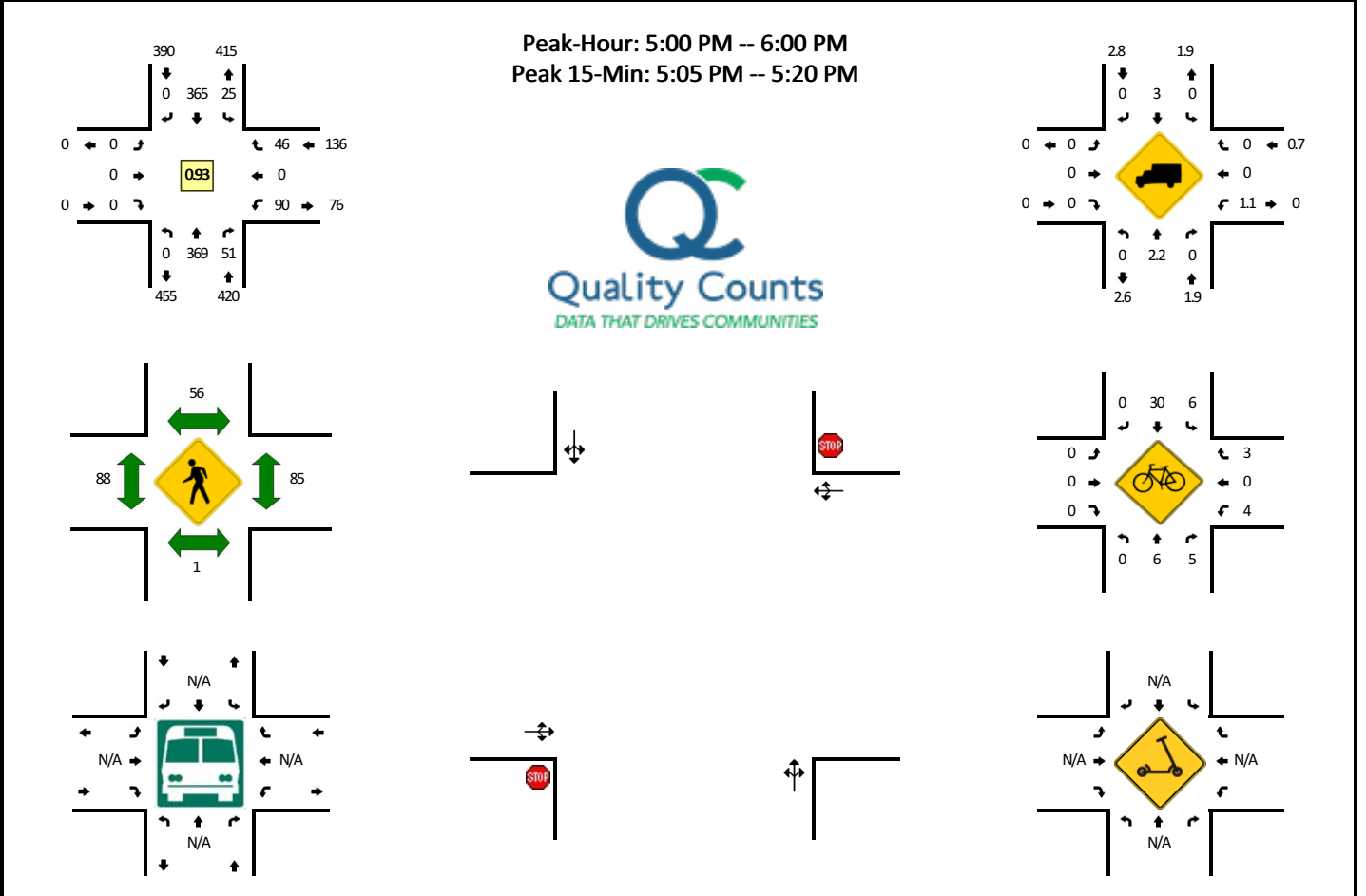


5-Min Count Period Beginning At	19 - SW 15th St (Northbound)				19 - SW 15th St (Southbound)				SW Washington Way (Eastbound)				SW Washington Way (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	22	0	0	0	17	3	0	11	0	5	0	0	0	0	0	64	
4:05 PM	2	26	0	0	0	26	10	0	17	0	6	0	0	0	0	0	87	
4:10 PM	1	23	0	0	0	19	6	0	9	0	8	0	0	0	0	0	66	
4:15 PM	1	16	0	0	0	24	10	0	11	0	1	0	0	0	0	0	63	
4:20 PM	1	15	0	0	0	20	13	0	4	0	2	0	0	0	0	0	55	
4:25 PM	1	13	0	0	0	17	8	0	12	0	5	0	0	0	0	0	56	
4:30 PM	4	21	0	0	0	13	8	0	10	0	4	0	0	0	0	0	60	
4:35 PM	4	24	0	0	0	11	7	0	7	0	5	0	0	0	0	0	58	
4:40 PM	3	21	0	0	0	16	6	0	14	0	2	0	0	0	0	0	62	
4:45 PM	2	18	0	0	0	22	13	0	15	0	12	0	0	0	0	0	82	
4:50 PM	1	22	0	0	0	17	9	0	16	0	6	0	0	0	0	0	71	
4:55 PM	1	18	0	0	0	22	10	0	8	0	1	0	0	0	0	0	60	784
5:00 PM	3	15	0	0	0	12	8	0	17	0	5	0	0	0	0	0	60	780
5:05 PM	3	23	0	0	0	34	9	0	20	0	5	0	0	0	0	0	94	787
5:10 PM	2	25	0	0	0	25	14	0	14	0	7	0	0	0	0	0	87	808
5:15 PM	4	14	0	0	0	23	15	0	12	0	5	0	0	0	0	0	73	818
5:20 PM	3	22	0	0	0	31	12	0	12	0	0	0	0	0	0	0	80	843
5:25 PM	3	27	0	0	0	27	14	0	11	0	6	0	0	0	0	0	88	875
5:30 PM	2	18	0	0	0	33	13	0	11	0	7	0	0	0	0	0	84	899
5:35 PM	1	26	0	0	0	21	10	0	10	0	11	0	0	0	0	0	79	920
5:40 PM	6	22	0	0	0	21	17	0	7	0	6	0	0	0	0	0	79	937
5:45 PM	4	28	0	0	0	24	9	0	5	0	4	0	0	0	0	0	74	929
5:50 PM	5	24	0	0	0	14	18	0	13	0	4	0	0	0	0	0	78	936
5:55 PM	5	29	0	0	0	31	18	0	14	0	3	0	0	0	0	0	100	976
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	36	248	0	0	0	328	152	0	184	0	68	0	0	0	0	0	1016	
Heavy Trucks	0	8	0	0	0	12	0	0	0	0	0	0	0	0	0	0	20	
Buses																		
Pedestrians		0				88				100				40			228	
Bicycles	0	0	0		0	28	4		4	0	0		0	0	0		36	
Scooters																		

Comments:

**LOCATION:** 20 - SW 15th St -- SW Washington Ave  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543958  
**DATE:** Tue, Oct 19 2021

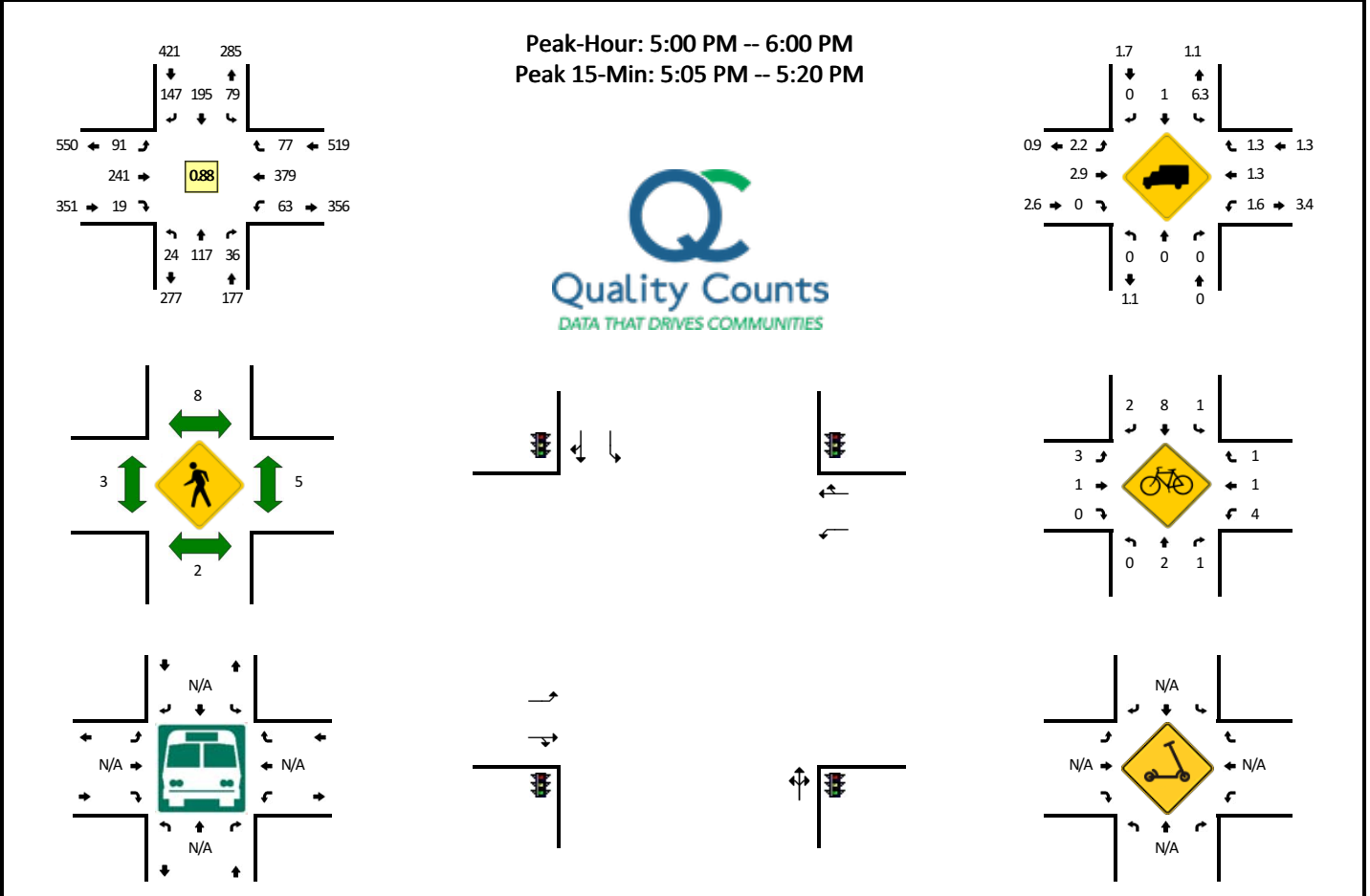


5-Min Count Period Beginning At	20 - SW 15th St (Northbound)				20 - SW 15th St (Southbound)				SW Washington Ave (Eastbound)				SW Washington Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	30	3	0	2	18	0	0	0	0	0	0	3	0	3	0	59	
4:05 PM	0	33	7	0	1	25	0	0	0	0	0	0	10	0	1	0	77	
4:10 PM	0	28	7	0	7	23	0	0	0	0	0	0	4	0	2	0	71	
4:15 PM	0	25	2	0	1	26	0	0	0	0	0	0	6	0	5	0	65	
4:20 PM	0	18	1	0	3	29	0	0	0	0	0	0	4	0	1	0	56	
4:25 PM	0	22	3	0	2	21	0	0	0	0	0	0	5	0	2	0	55	
4:30 PM	0	27	4	0	0	17	0	0	0	0	0	0	3	0	2	0	53	
4:35 PM	0	28	3	0	1	12	0	0	0	0	0	0	6	0	1	0	51	
4:40 PM	0	32	2	0	1	19	0	0	0	0	0	0	5	0	3	0	62	
4:45 PM	0	30	4	0	4	30	0	0	0	0	0	0	8	0	3	0	79	
4:50 PM	0	33	3	0	2	17	0	0	0	0	0	0	5	0	2	0	62	
4:55 PM	0	25	4	0	1	22	0	0	0	0	0	0	10	0	0	0	62	752
5:00 PM	0	29	4	0	2	18	0	0	0	0	0	0	6	0	2	0	61	754
5:05 PM	0	36	5	0	5	31	0	0	0	0	0	0	8	0	3	0	88	765
5:10 PM	0	36	5	0	5	36	0	0	0	0	0	0	4	0	6	0	92	786
5:15 PM	0	21	5	0	2	29	0	0	0	0	0	0	12	0	5	0	74	795
5:20 PM	0	29	6	0	0	35	0	0	0	0	0	0	8	0	4	0	82	821
5:25 PM	0	34	4	0	1	31	0	0	0	0	0	0	9	0	5	0	84	850
5:30 PM	0	24	5	0	4	38	0	0	0	0	0	0	7	0	1	0	79	876
5:35 PM	0	33	3	0	0	28	0	0	0	0	0	0	5	0	9	0	78	903
5:40 PM	0	26	3	0	1	27	0	0	0	0	0	0	10	0	3	0	70	911
5:45 PM	0	29	4	0	2	26	0	0	0	0	0	0	4	0	3	0	68	900
5:50 PM	0	33	3	0	2	29	0	0	0	0	0	0	5	0	3	0	75	913
5:55 PM	0	39	4	0	1	37	0	0	0	0	0	0	12	0	2	0	95	946
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	372	60	0	48	384	0	0	0	0	0	0	96	0	56	0	1016	
Heavy Trucks	0	8	0	0	0	12	0	0	0	0	0	0	0	0	0	0	20	
Buses																		
Pedestrians		0				48					92			68			208	
Bicycles	0	0	8		4	32	0			0	0		4	0	4		52	
Scoters																		

Comments:

**LOCATION:** 21 - SW 35th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439116  
**DATE:** Tue, Oct 19 2021

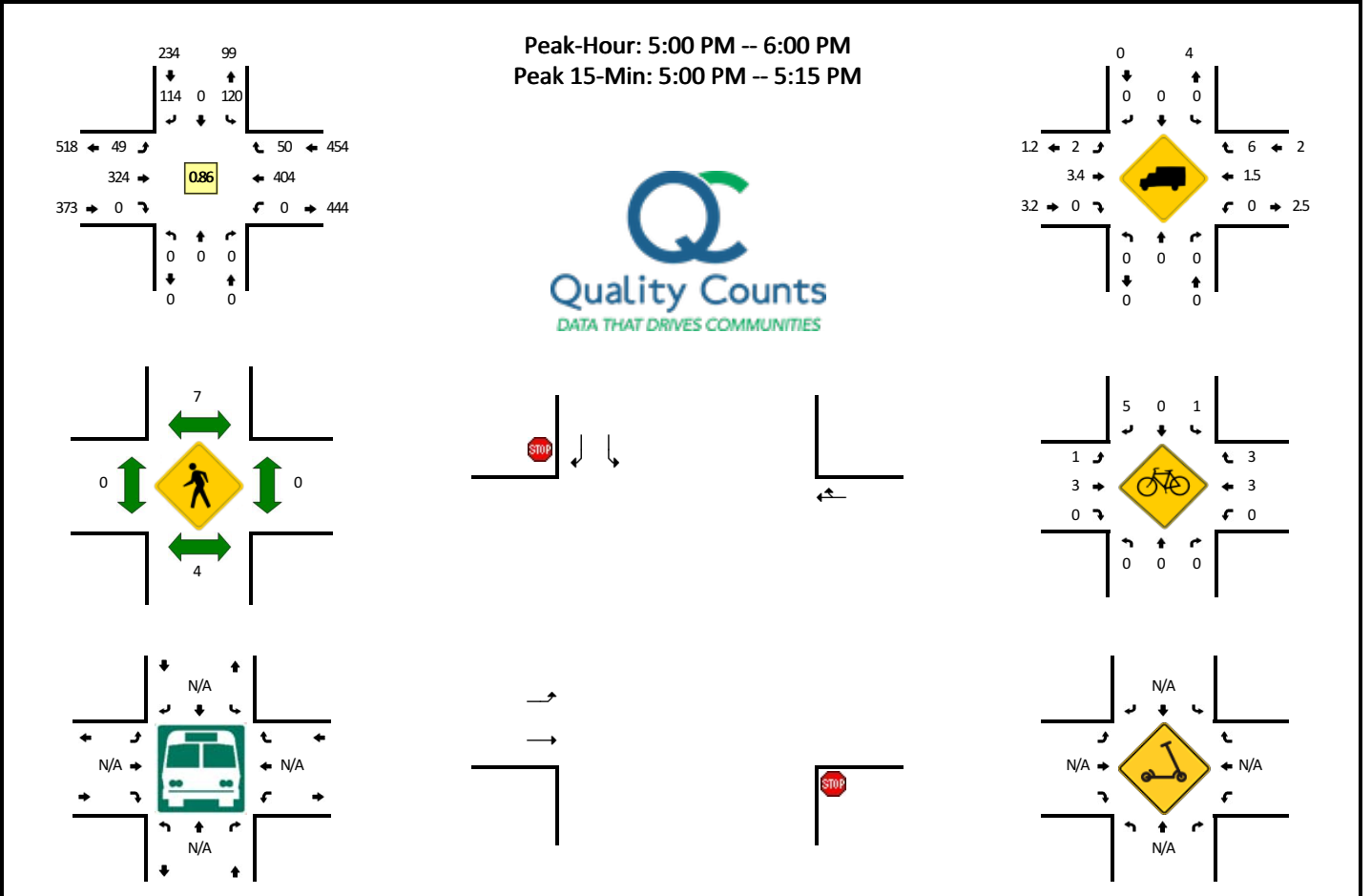


5-Min Count Period Beginning At	21 - SW 35th St (Northbound)				21 - SW 35th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	2	7	2	0	4	20	9	0	8	26	1	0	4	37	5	0	125	
5:05 PM	2	19	5	0	7	26	19	0	3	24	1	0	6	31	3	0	146	
5:10 PM	2	16	2	0	8	15	6	0	8	17	1	0	13	45	7	0	140	
5:15 PM	2	8	5	0	6	21	15	0	11	15	1	0	12	30	7	0	133	
5:20 PM	6	4	0	0	10	23	17	0	10	15	3	0	5	33	8	0	134	
5:25 PM	3	10	4	0	3	14	17	0	7	25	2	0	6	40	4	0	135	
5:30 PM	1	5	1	0	10	15	15	0	10	23	4	0	3	27	6	0	120	
5:35 PM	0	8	4	0	11	8	12	0	6	9	0	0	3	33	9	0	103	
5:40 PM	1	13	5	0	4	11	10	0	14	18	4	0	3	20	8	0	111	
5:45 PM	2	10	4	0	6	13	4	0	4	32	1	0	4	30	7	0	117	
5:50 PM	2	8	3	0	8	18	9	0	4	20	0	0	3	31	6	0	112	
5:55 PM	1	9	1	0	2	11	14	0	6	17	1	0	1	22	7	0	92	1468
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	24	172	48	0	84	248	160	0	88	224	12	0	124	424	68	0	1676	
Heavy Trucks	0	0	0	0	8	4	0	0	8	8	0	0	0	4	0	0	32	
Buses																		
Pedestrians		0				8				0				8			16	
Bicycles		4				8				4				4			48	
Scooters																		

*Comments:*

**LOCATION:** 22 - SW 30th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543940  
**DATE:** Tue, Oct 19 2021

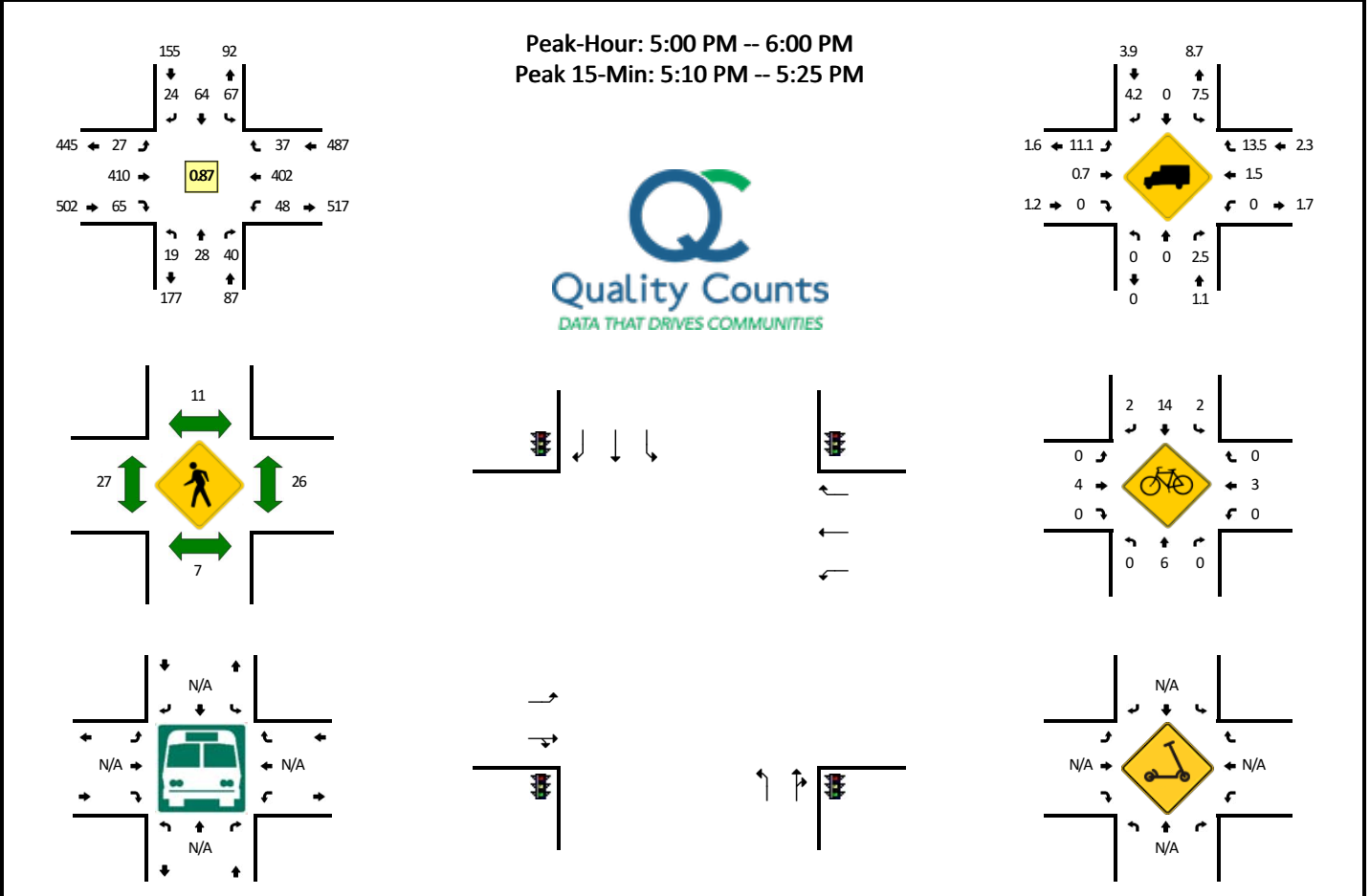


5-Min Count Period Beginning At	22 - SW 30th St (Northbound)				22 - SW 30th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	9	0	4	0	3	26	0	0	0	26	4	0	72	
4:05 PM	0	0	0	0	7	0	9	0	2	38	0	0	0	31	1	0	88	
4:10 PM	0	0	0	0	9	0	10	0	0	32	0	0	0	45	4	0	100	
4:15 PM	0	0	0	0	8	0	5	0	1	29	0	0	0	31	4	0	78	
4:20 PM	0	0	0	0	10	0	10	0	3	34	0	0	0	20	5	0	82	
4:25 PM	0	0	0	0	5	0	8	0	5	32	0	0	0	15	6	0	71	
4:30 PM	0	0	0	0	11	0	5	0	2	27	0	0	0	22	3	0	70	
4:35 PM	0	0	0	0	3	0	15	0	1	32	0	0	0	20	3	0	74	
4:40 PM	0	0	0	0	12	0	1	0	5	32	0	0	0	23	2	0	75	
4:45 PM	0	0	0	0	6	0	11	0	4	36	0	0	0	26	4	0	87	
4:50 PM	0	0	0	0	6	0	4	0	10	36	0	0	0	25	3	0	84	
4:55 PM	0	0	0	0	10	0	10	0	5	19	0	0	0	33	5	0	82	963
5:00 PM	0	0	0	0	8	0	7	0	2	32	0	0	0	38	3	0	90	981
5:05 PM	0	0	0	0	15	0	11	0	4	37	0	0	0	30	8	0	105	998
5:10 PM	0	0	0	0	17	0	17	0	2	26	0	0	0	47	4	0	113	1011
5:15 PM	0	0	0	0	10	0	12	0	1	23	0	0	0	36	4	0	86	1019
5:20 PM	0	0	0	0	11	0	10	0	3	26	0	0	0	31	3	0	84	1021
5:25 PM	0	0	0	0	15	0	6	0	3	27	0	0	0	41	3	0	95	1045
5:30 PM	0	0	0	0	7	0	12	0	2	34	0	0	0	27	1	0	83	1058
5:35 PM	0	0	0	0	8	0	10	0	3	20	0	0	0	31	6	0	78	1062
5:40 PM	0	0	0	0	15	0	7	0	10	24	0	0	0	28	5	0	89	1076
5:45 PM	0	0	0	0	3	0	7	0	11	27	0	0	0	35	4	0	87	1076
5:50 PM	0	0	0	0	6	0	7	0	6	28	0	0	0	34	2	0	83	1075
5:55 PM	0	0	0	0	5	0	8	0	2	20	0	0	0	26	7	0	68	1061
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	160	0	140	0	32	380	0	0	0	460	60	0	1232	
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	12	4	0	24	
Buses																		
Pedestrians		8				8				0				0			16	
Bicycles	0	0	0		0	0	12		0	0	0		0	4	8		24	
Scoters																		

Comments:

**LOCATION:** 23 - SW 26th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439118  
**DATE:** Tue, Oct 19 2021



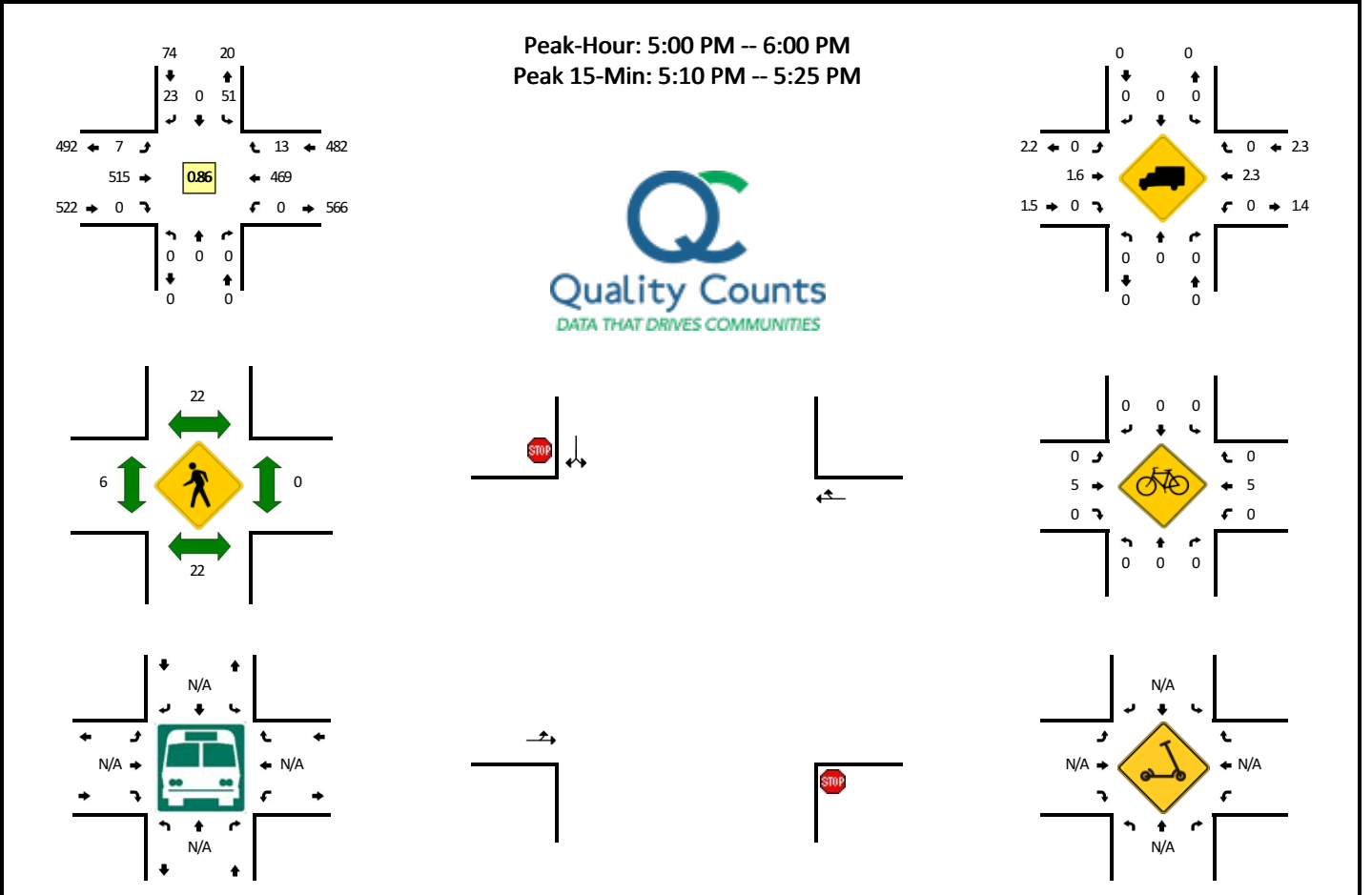
5-Min Count Period Beginning At	23 - SW 26th St (Northbound)				23 - SW 26th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	3	2	3	0	9	4	4	0	1	30	5	0	3	28	3	0	95	
5:05 PM	3	1	0	0	3	8	0	0	3	38	7	0	5	41	2	0	111	
5:10 PM	1	2	3	0	8	5	1	0	2	44	11	0	7	44	3	0	131	
5:15 PM	0	4	6	0	7	5	2	0	2	30	3	0	0	29	1	0	89	
5:20 PM	3	1	6	0	11	8	0	0	5	44	4	0	6	42	2	0	132	
5:25 PM	2	2	0	0	4	2	4	0	1	33	7	0	4	41	0	0	100	
5:30 PM	1	1	3	0	4	9	3	0	3	40	4	0	3	26	2	0	99	
5:35 PM	0	3	4	0	7	10	1	0	5	26	9	0	4	29	2	0	100	
5:40 PM	2	2	6	0	5	6	1	0	1	31	7	0	4	31	5	0	101	
5:45 PM	1	2	2	0	3	4	2	0	1	35	3	0	5	35	4	0	97	
5:50 PM	3	6	6	0	4	2	3	0	1	28	3	0	4	28	7	0	95	
5:55 PM	0	2	1	0	2	1	3	0	2	31	2	0	3	28	6	0	81	1231
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	28	60	0	104	72	12	0	36	472	72	0	52	460	24	0	1408	
Heavy Trucks	0	0	0	0	8	0	0	0	4	4	0	0	0	0	4	0	20	
Buses																		
Pedestrians		12				16				20				32			80	
Bicycles	0	12	0		0	20	4		0	8	0		0	4	0		48	
Scooters																		

Comments:



**LOCATION:** 24 - SW Stadium Ave -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439120  
**DATE:** Tue, Oct 19 2021

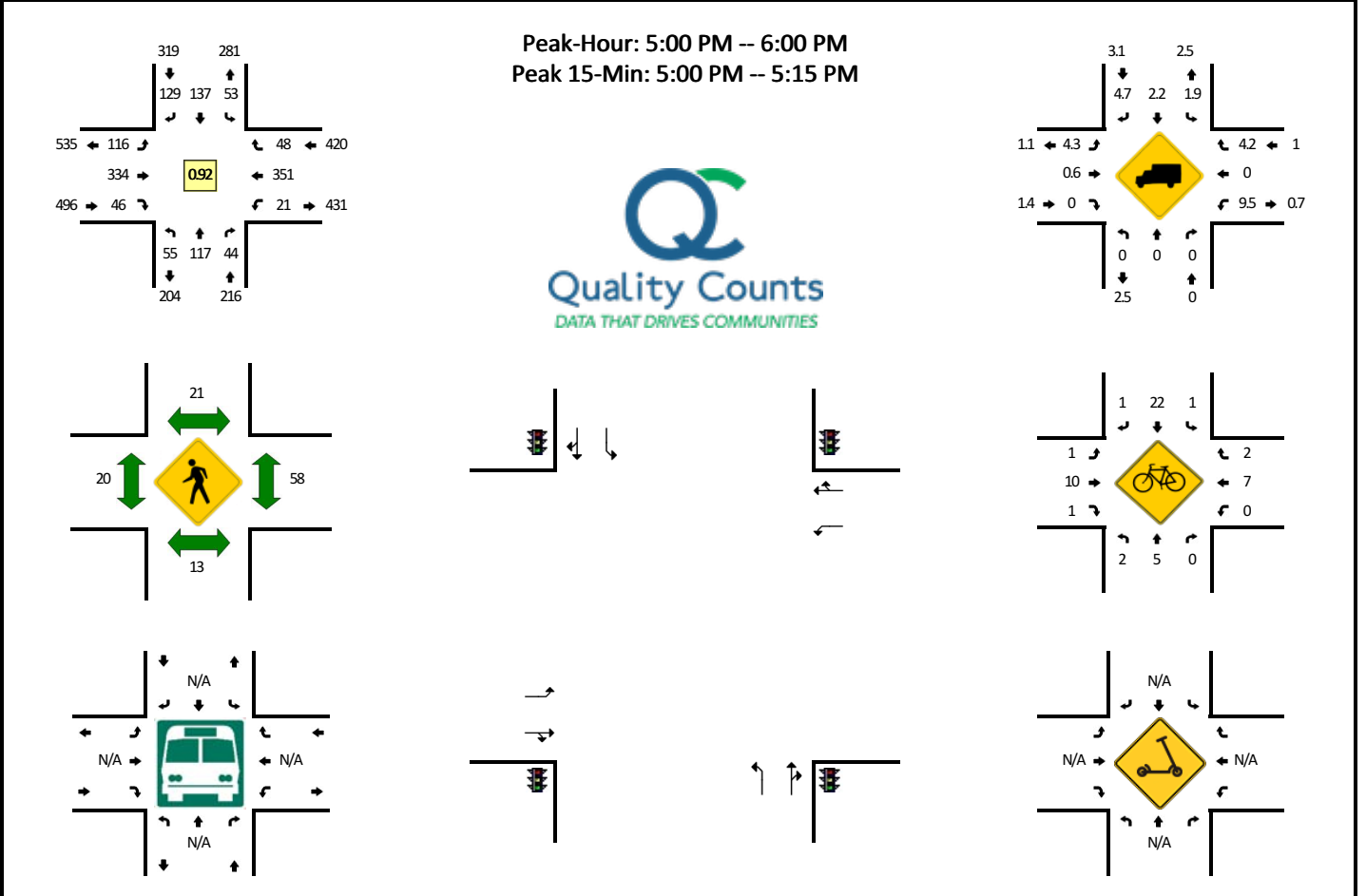


5-Min Count Period Beginning At	24 - SW Stadium Ave (Northbound)				24 - SW Stadium Ave (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	0	0	0	0	2	0	4	0	0	39	0	0	0	30	1	0	76	
5:05 PM	0	0	0	0	9	0	3	0	0	33	0	0	0	49	0	0	94	
5:10 PM	0	0	0	0	3	0	2	0	1	62	0	0	0	50	2	0	120	
5:15 PM	0	0	0	0	9	0	2	0	1	42	0	0	0	33	0	0	87	
5:20 PM	0	0	0	0	3	0	2	0	1	57	0	0	0	44	1	0	108	
5:25 PM	0	0	0	0	3	0	3	0	1	35	0	0	0	43	1	0	86	
5:30 PM	0	0	0	0	8	0	0	0	0	52	0	0	0	29	1	0	90	
5:35 PM	0	0	0	0	3	0	3	0	0	42	0	0	0	34	1	0	83	
5:40 PM	0	0	0	0	2	0	1	0	1	43	0	0	0	41	1	0	89	
5:45 PM	0	0	0	0	2	0	3	0	0	40	0	0	0	36	1	0	82	
5:50 PM	0	0	0	0	4	0	0	0	2	40	0	0	0	39	2	0	87	
5:55 PM	0	0	0	0	3	0	0	0	0	30	0	0	0	41	2	0	76	1078
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	60	0	24	0	12	644	0	0	0	508	12	0	1260	
Heavy Trucks	0	0	0	0	0	0	0	0	0	12	0	0	0	4	0	0	16	
Buses																		
Pedestrians		24				8				0				0			32	
Bicycles	0	0	0		0	0	0		0	8	0		0	4	0		12	
Scooters																		

*Comments:*

**LOCATION:** 25 - SW 15th St -- SW Western Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543946  
**DATE:** Wed, Oct 20 2021



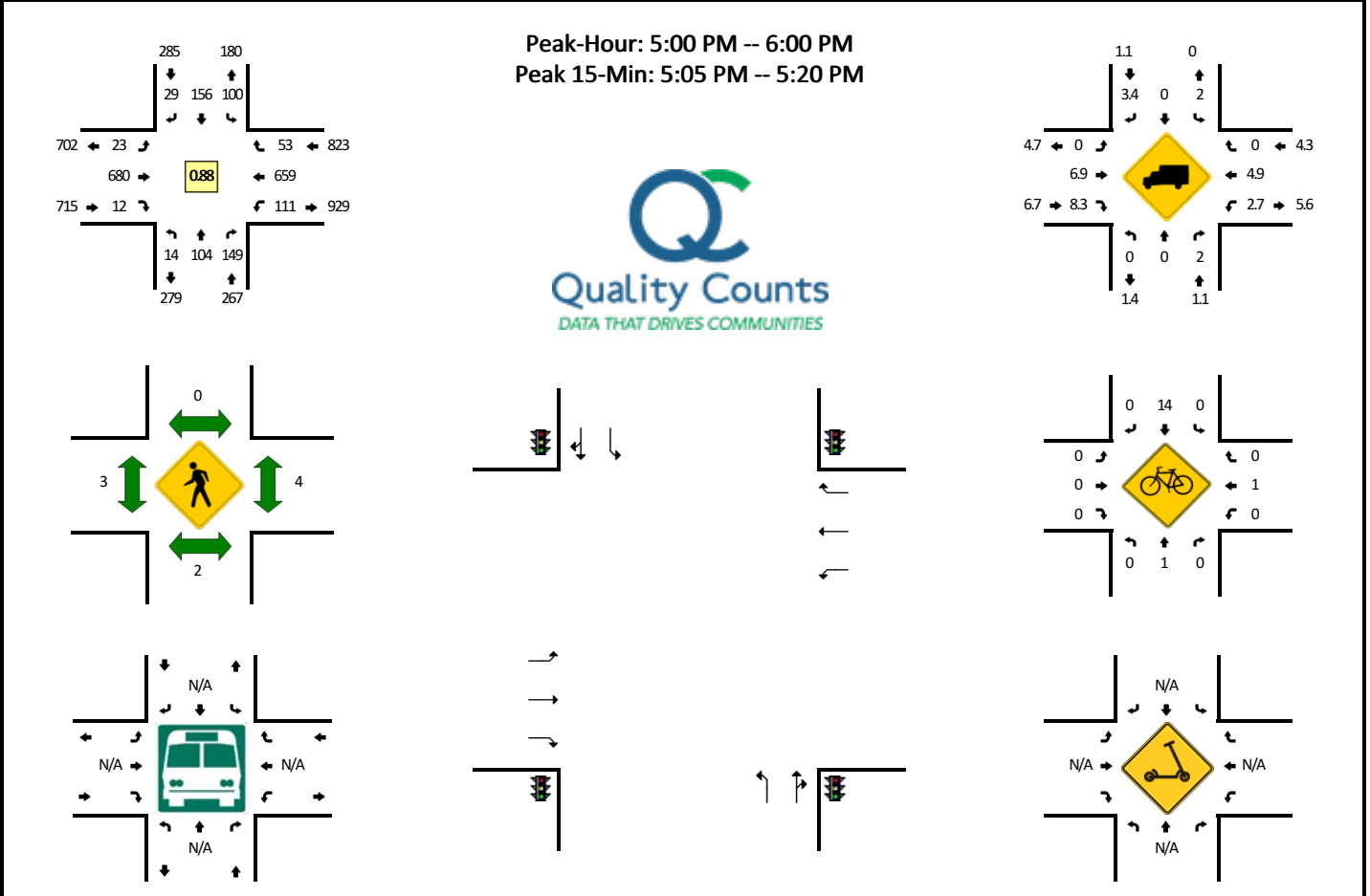
5-Min Count Period Beginning At	25 - SW 15th St (Northbound)				25 - SW 15th St (Southbound)				SW Western Blvd (Eastbound)				SW Western Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	12	3	0	6	10	7	0	11	32	1	0	3	28	4	0	119	
4:05 PM	6	8	4	0	1	15	14	0	10	42	6	0	5	19	2	0	132	
4:10 PM	3	5	4	0	6	13	11	0	12	32	10	0	1	26	8	0	131	
4:15 PM	1	7	5	0	3	11	6	0	11	27	4	0	5	19	4	0	103	
4:20 PM	3	9	3	0	2	9	6	0	9	25	5	0	6	23	3	0	103	
4:25 PM	4	6	2	0	1	14	5	0	6	32	1	0	4	19	2	0	96	
4:30 PM	4	7	1	0	3	10	5	0	7	23	2	0	1	25	6	0	94	
4:35 PM	2	12	5	0	8	10	12	0	11	27	5	0	5	26	2	0	125	
4:40 PM	3	11	2	0	2	5	6	0	8	38	2	0	3	37	5	0	122	
4:45 PM	8	10	3	0	2	11	5	0	7	30	5	0	3	26	7	0	117	
4:50 PM	6	10	5	0	3	11	11	0	13	12	5	0	4	26	7	0	113	
4:55 PM	2	13	2	0	3	14	16	0	7	35	3	0	3	30	6	0	134	1389
5:00 PM	6	8	1	0	3	12	8	0	12	27	7	0	3	37	7	0	131	1401
5:05 PM	5	6	4	0	10	14	11	0	8	32	1	0	5	33	2	0	131	1400
5:10 PM	6	9	2	0	4	10	16	0	10	32	6	0	1	31	4	0	131	1400
5:15 PM	2	5	2	0	2	19	11	0	11	35	3	0	0	31	1	0	122	1419
5:20 PM	2	11	7	0	5	12	9	0	9	42	3	0	0	34	6	0	140	1456
5:25 PM	6	11	4	0	6	16	10	0	8	24	2	0	1	24	5	0	117	1477
5:30 PM	2	10	6	0	3	14	8	0	7	32	6	0	2	34	5	0	129	1512
5:35 PM	9	13	3	0	3	7	12	0	6	34	1	0	2	18	7	0	115	1502
5:40 PM	3	14	5	0	5	6	14	0	10	25	6	0	1	35	5	0	129	1509
5:45 PM	8	8	2	0	5	3	10	0	12	29	4	0	2	27	2	0	112	1504
5:50 PM	5	9	6	0	1	9	6	0	9	12	2	0	1	30	1	0	91	1482
5:55 PM	1	13	2	0	6	15	14	0	14	10	5	0	3	17	3	0	103	1451

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	92	28	0	68	144	140	0	120	364	56	0	36	404	52	0	1572
Heavy Trucks	0	0	0		4	0	8		4	0	0		0	0	4		20
Buses																	
Pedestrians		12				24				32				60			128
Bicycles	4	8	0		4	24	4		0	4	0		0	4	0		52
Scoters																	

*Comments:*

**LOCATION:** 26 - SW 35th St -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439122  
**DATE:** Tue, Oct 19 2021

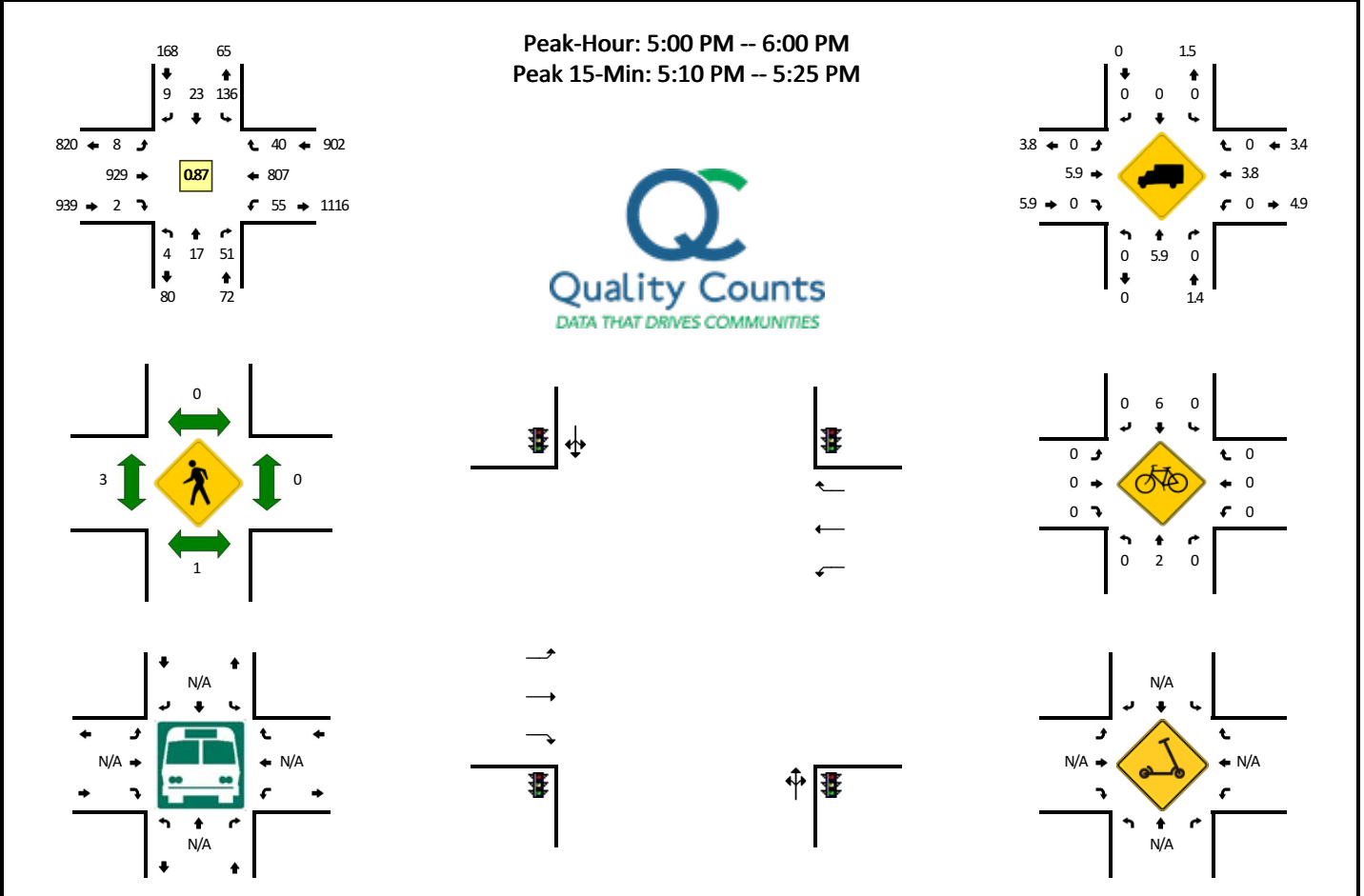


5-Min Count Period Beginning At	26 - SW 35th St (Northbound)				26 - SW 35th St (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	3	12	16	0	13	21	2	0	2	53	1	0	10	44	1	0	178	
5:05 PM	1	13	13	0	7	12	4	0	5	68	0	0	11	59	6	0	199	
5:10 PM	0	12	25	0	11	20	7	0	3	51	0	0	7	54	6	0	196	
5:15 PM	1	8	14	0	8	14	4	0	0	61	2	0	13	68	5	0	198	
5:20 PM	1	12	15	0	13	16	5	0	0	43	0	0	11	58	2	0	176	
5:25 PM	0	5	12	0	5	12	1	0	1	62	4	0	16	82	6	0	206	
5:30 PM	1	4	12	0	10	17	0	0	0	61	2	0	7	49	3	0	166	
5:35 PM	1	7	5	0	5	4	0	0	0	61	0	0	10	66	7	0	166	
5:40 PM	2	13	10	0	7	10	2	0	5	50	0	0	6	39	3	0	147	
5:45 PM	1	5	5	0	5	10	3	0	6	69	2	0	8	48	3	0	165	
5:50 PM	1	7	12	0	10	10	1	0	0	49	0	0	8	38	4	0	140	
5:55 PM	2	6	10	0	6	10	0	0	1	52	1	0	4	54	7	0	153	2090
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	132	208	0	104	184	60	0	32	720	8	0	124	724	68	0	2372	
Heavy Trucks	0	0	4	0	4	0	0	0	0	68	4	0	4	40	0	0	124	
Buses																	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	12	
Scoters																	0	

*Comments:*

**LOCATION:** 27 - SW 26th St/SW Brooklane Dr -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 155439124  
**DATE:** Tue, Oct 19 2021



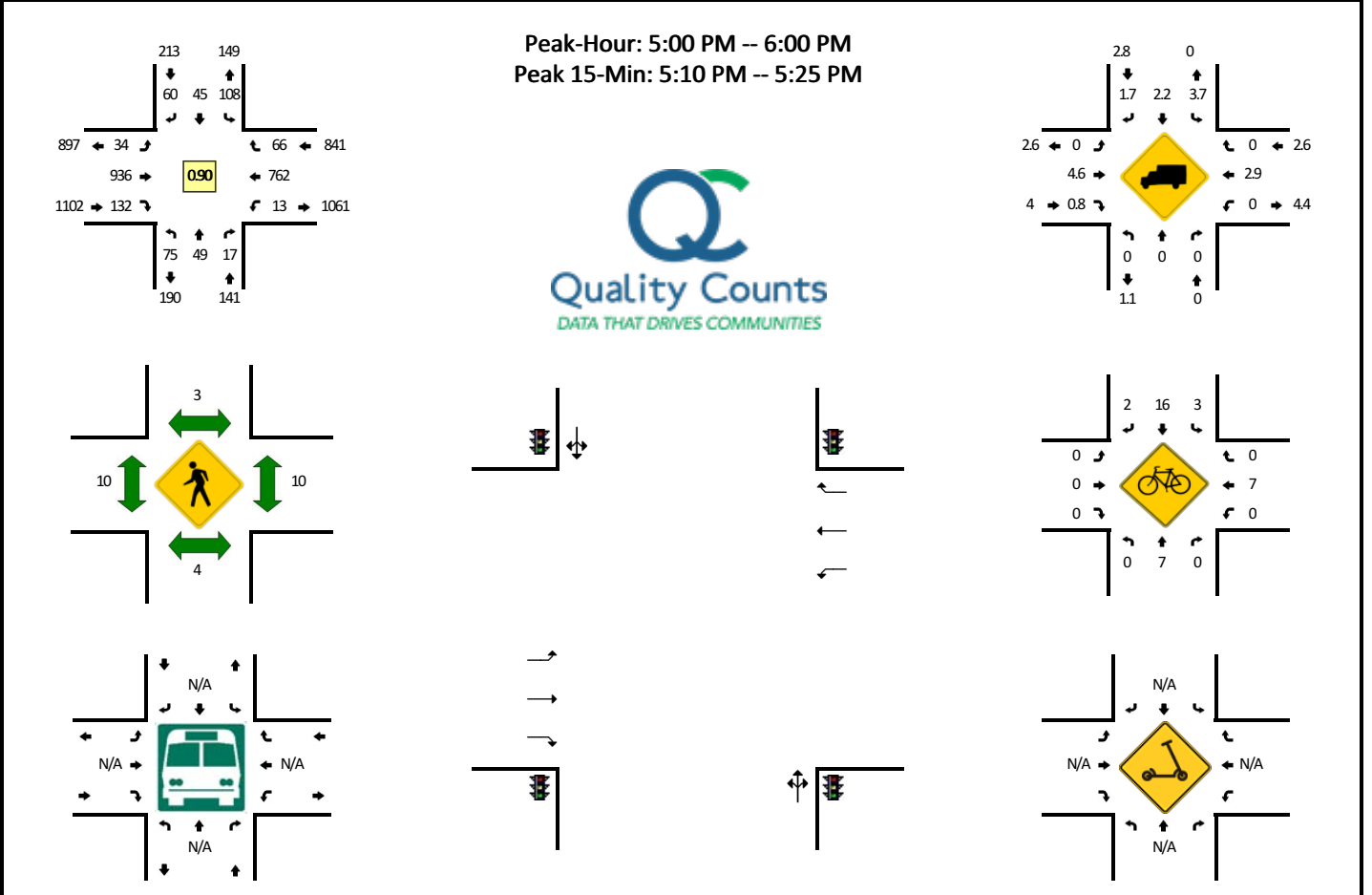
5-Min Count Period Beginning At	27 - SW 26th St/SW Brooklane Dr (Northbound)				27 - SW 26th St/SW Brooklane Dr (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	1	1	2	0	13	2	0	0	0	88	0	0	4	60	2	0	173	
5:05 PM	0	2	7	0	18	2	1	0	0	69	0	0	8	63	4	0	174	
5:10 PM	0	2	6	0	8	4	0	0	0	91	0	0	3	81	2	0	197	
5:15 PM	0	1	8	0	15	1	0	0	2	70	0	0	6	74	3	0	180	
5:20 PM	1	0	5	0	9	1	3	0	0	96	0	0	2	103	3	0	223	
5:25 PM	1	2	5	0	14	2	1	0	0	72	0	0	7	76	3	0	183	
5:30 PM	1	0	2	0	10	2	0	0	0	92	0	0	1	58	3	0	169	
5:35 PM	0	3	7	0	13	0	2	0	2	58	0	0	5	69	3	0	162	
5:40 PM	0	2	2	0	16	1	0	0	1	97	0	0	9	57	2	0	187	
5:45 PM	0	3	4	0	11	4	0	0	1	66	1	0	3	52	0	0	145	
5:50 PM	0	1	3	0	4	3	0	0	2	80	1	0	3	52	8	0	157	
5:55 PM	0	0	0	0	5	1	2	0	0	50	0	0	4	62	7	0	131	2081

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	12	76	0	128	24	12	0	8	1028	0	0	44	1032	32	0	2400
Heavy Trucks	0	0	0		0	0	0		0	72	0		0	32	0		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	4	0		0	0	0		0	0	0		4
Scoters																	

Comments:

**LOCATION:** 28 - SW 15th St -- Hwy 20/Philomath Blvd  
**CITY/STATE:** Corvallis, OR

**QC JOB #:** 15543952  
**DATE:** Tue, Oct 19 2021



5-Min Count Period Beginning At	28 - SW 15th St (Northbound)				28 - SW 15th St (Southbound)				Hwy 20/Philomath Blvd (Eastbound)				Hwy 20/Philomath Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	1	0	0	7	6	5	0	2	80	13	0	3	67	4	0	191	
4:05 PM	5	3	2	0	13	5	4	0	1	89	14	0	0	63	6	0	205	
4:10 PM	6	1	0	0	15	1	6	0	3	75	12	0	2	58	11	0	190	
4:15 PM	4	4	2	0	9	4	5	0	4	83	12	0	1	60	7	0	195	
4:20 PM	12	9	0	0	9	3	1	0	1	82	6	0	1	73	2	0	199	
4:25 PM	8	3	0	0	8	1	2	0	3	79	13	0	0	71	8	0	196	
4:30 PM	4	3	0	0	9	3	3	0	1	77	9	0	0	89	3	0	201	
4:35 PM	4	3	3	0	7	4	1	0	6	80	12	0	1	55	2	0	178	
4:40 PM	4	4	0	0	13	2	3	0	3	83	11	0	1	72	8	0	204	
4:45 PM	6	2	0	0	9	2	4	0	2	82	10	0	0	66	3	0	186	
4:50 PM	5	4	1	0	7	4	2	0	2	73	13	0	0	77	5	0	193	
4:55 PM	8	1	0	0	7	2	6	0	1	80	8	0	0	66	2	0	181	2319
5:00 PM	6	4	3	0	9	1	5	0	1	82	12	0	0	58	2	0	183	2311
5:05 PM	4	4	1	0	11	5	6	0	3	81	11	0	1	64	13	0	204	2310
5:10 PM	11	2	0	0	11	3	5	0	2	90	15	0	0	72	5	0	216	2336
5:15 PM	5	3	1	0	12	3	9	0	1	78	14	0	1	73	4	0	204	2345
5:20 PM	4	4	1	0	6	3	5	0	1	84	15	0	1	91	4	0	219	2365
5:25 PM	5	5	0	0	6	4	5	0	3	87	12	0	2	75	6	0	210	2379
5:30 PM	8	7	0	0	7	0	4	0	1	86	7	0	3	49	1	0	173	2351
5:35 PM	9	6	5	0	6	7	4	0	5	83	5	0	1	59	3	0	193	2366
5:40 PM	7	4	4	0	9	3	4	0	4	73	12	0	2	64	9	0	195	2357
5:45 PM	4	5	2	0	10	4	1	0	4	76	11	0	0	45	7	0	169	2340
5:50 PM	3	2	0	0	13	5	4	0	2	57	11	0	2	59	6	0	164	2311
5:55 PM	9	3	0	0	8	7	8	0	7	59	7	0	0	53	6	0	167	2297
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	80	36	8	0	116	36	76	0	16	1008	176	0	8	944	52	0	2556	
Heavy Trucks	0	0	0	0	4	0	0	0	0	48	0	0	0	16	0	0	68	
Buses																		
Pedestrians		0			4				8				4				16	
Bicycles	0	4	0		0	12	0		0	0	0		0	8	0		24	
Scoters																		

Comments:

Appendix C Existing Conditions Operational  
Results Worksheets

24247.001 OSU TOS

Vistro File: H:\...\TOS\_2021-2022\_updated.vistro  
Report File: H:\...\Operations\_AM.pdf

Scenario 1 Ex AM  
1/30/2022

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
101	36th St & Harrison Blvd	Signalized	HCM 6th Edition	EB Left	0.393	11.1	B
102	35th St & Harrison Blvd	Signalized	HCM 6th Edition	NB Right	0.217	15.7	B
103	30th St & Harrison Blvd	Two-way stop	HCM 6th Edition	SB Left	0.035	53.4	F
104	29th St & Harrison Blvd	Signalized	HCM 6th Edition	WB Thru	0.784	15.3	B
105	30th St & Orchard Ave	Two-way stop	HCM 6th Edition	EB Thru	0.058	16.1	C
106	26th St & Monroe Ave	All-way stop	HCM 6th Edition	SEB Thru	0.184	7.9	A
107	25th St & Monroe Ave	Two-way stop	HCM 6th Edition	SB Thru	0.049	19.8	C
108	Kings Blvd & Monroe Ave	All-way stop	HCM 6th Edition	EB Thru	0.226	8.7	A
109	14th St & Monroe Ave	Signalized	HCM 6th Edition	WB Left	0.279	16.0	B
110	35th St & Campus Way	Two-way stop	HCM 6th Edition	EB Left	0.010	17.2	C
111	35th St & Jefferson Way	Two-way stop	HCM 6th Edition	WB Left	0.101	20.6	C
112	14th St & Jefferson Way	Signalized	HCM 6th Edition	NB Left	0.258	10.4	B
113	11th St & Jefferson Ave	Two-way stop	HCM 6th Edition	NB Left	0.009	14.6	B
114	9th St & Jefferson Ave	Signalized	HCM 6th Edition	NB Thru	0.336	5.3	A
115	9th St & Monroe Ave	Signalized	HCM 6th Edition	EB Left	0.190	15.9	B
116	30th St & Washington Way	All-way stop	HCM 6th Edition	SB Thru	0.209	8.8	A
117	26th St & Washington Way	All-way stop	HCM 6th Edition	NB Left	0.197	8.4	A
			HCM 6th				

118	17th St & Washington Way	Two-way stop	HCM 6th Edition	NB Left	0.008	10.7	B
119	15th St & Washington Way	Signalized	HCM 6th Edition	EB Left	0.252	12.2	B
120	15th St & Washington Ave	Two-way stop	HCM 6th Edition	WB Left	0.159	19.4	C
121	35th St & Western Blvd	Signalized	HCM 6th Edition	NB Thru	0.753	12.8	B
122	30th St & Western Blvd	Two-way stop	HCM 6th Edition	SB Left	0.157	27.3	D
123	26th St & Western Blvd	Signalized	HCM 6th Edition	SB Left	0.623	14.7	B
125	15th St & Western Blvd	Signalized	HCM 6th Edition	SB Left	0.723	17.1	B
126	35th St & US 20	Signalized	HCM 6th Edition	EB Left	0.783	27.9	C
127	26th St & US 20	Signalized	HCM 6th Edition	NEB Left	0.757	8.8	A
128	15th St & US 20	Signalized	HCM 6th Edition	WB Left	0.782	10.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.



**Intersection Level Of Service Report  
Intersection 101: 36th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

**Intersection Setup**

Name	36th St		Harrison Blvd		Harrison Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	36th St		Harrison Blvd		Harrison Blvd	
Base Volume Input [veh/h]	118	30	36	244	107	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	10.00	6.00	2.00	5.00	17.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	118	30	36	244	107	23
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	9	10	71	31	7
Total Analysis Volume [veh/h]	137	35	42	284	124	27
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2		2		1	
v_di, Inbound Pedestrian Volume crossing in	2		2		0	
v_co, Outbound Pedestrian Volume crossing	3		0		3	
v_ci, Inbound Pedestrian Volume crossing mi	3		1		3	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	1		4		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	178
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	34.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

**Phasing & Timing**

Control Type	Permissive	Overlap	ProtPerm	Overlap	Permissive	Permissive
Signal Group	4	4	5	2	6	6
Auxiliary Signal Groups		2,4		2,4		
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	5	3	5	5	5
Maximum Green [s]	40	40	15	55	55	55
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5
Walk [s]	5	5	0	5	5	5
Pedestrian Clearance [s]	13	13	0	13	13	13
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall	No	No	No	Yes	Yes	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	6.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	L	C	C
C, Cycle Length [s]	35	35	35	35	35
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	0.00	2.50	0.00	2.50
g_i, Effective Green Time [s]	12	21	1	21	4
g / C, Green / Cycle	0.33	0.61	0.03	0.61	0.12
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.02	0.15	0.09
s, saturation flow rate [veh/h]	1094	1452	1724	1870	1760
c, Capacity [veh/h]	420	888	49	1144	217
d1, Uniform Delay [s]	12.88	2.68	16.82	3.09	14.63
k, delay calibration	0.08	0.08	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.01	24.94	0.08	2.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.04	0.85	0.25	0.70
d, Delay for Lane Group [s/veh]	13.21	2.70	41.77	3.17	17.61
Lane Group LOS	B	A	D	A	B
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.84	0.04	0.63	0.39	1.14
50th-Percentile Queue Length [ft/ln]	21.04	1.06	15.78	9.81	28.56
95th-Percentile Queue Length [veh/ln]	1.52	0.08	1.14	0.71	2.06
95th-Percentile Queue Length [ft/ln]	37.88	1.91	28.40	17.65	51.40

**Movement, Approach, & Intersection Results**

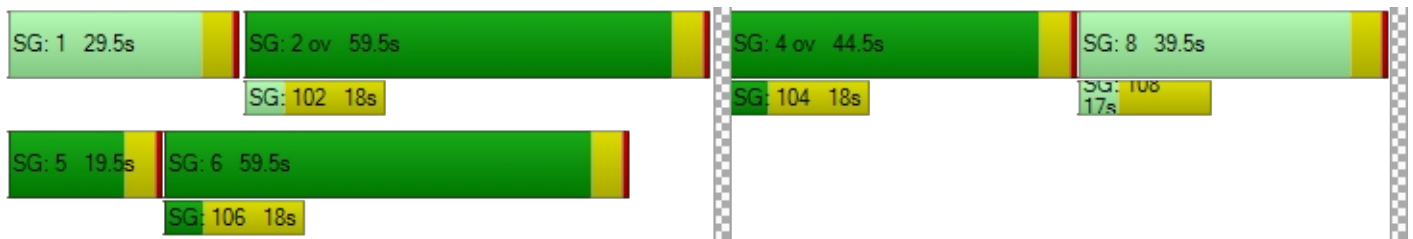
d_M, Delay for Movement [s/veh]	13.21	2.70	41.77	3.17	17.61	17.61
Movement LOS	B	A	D	A	B	B
d_A, Approach Delay [s/veh]	11.07		8.15		17.61	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	11.12					
Intersection LOS	B					
Intersection V/C	0.393					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	9.59	9.59	9.59
I_p,int, Pedestrian LOS Score for Intersection	1.953	2.020	2.090
Crosswalk LOS	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	2295	5709	3156
d_b, Bicycle Delay [s]	0.38	60.06	5.82
I_b,int, Bicycle LOS Score for Intersection	1.560	2.098	1.809
Bicycle LOS	A	B	A

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 102: 35th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.217

**Intersection Setup**

Name	35th St			NW 35th St			Harrison Blvd			Harrison Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			0.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			NW 35th St			Harrison Blvd			Harrison Blvd		
Base Volume Input [veh/h]	33	2	160	0	0	0	0	160	202	113	97	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	11.00	0.00	1.00	0.00	0.00	0.00	0.00	6.00	3.00	2.00	8.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	2	160	0	0	0	0	160	202	113	97	0
Peak Hour Factor	0.8100	0.8100	0.8100	1.0000	1.0000	1.0000	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	1	49	0	0	0	0	49	62	35	30	0
Total Analysis Volume [veh/h]	41	2	198	0	0	0	0	198	249	140	120	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			2			0			2		
v_di, Inbound Pedestrian Volume crossing in	0			2			0			2		
v_co, Outbound Pedestrian Volume crossing	2			1			2			2		
v_ci, Inbound Pedestrian Volume crossing mi	2			2			1			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	178
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	34.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	9.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	8	8	8	0	0	0	2	2	2	1	6	6	
Auxiliary Signal Groups													
Lead / Lag	Lag	-	-	-	-	-	Lag	-	-	Lead	-	-	
Minimum Green [s]	5	5	5	0	0	0	5	5	5	3	5	5	
Maximum Green [s]	35	35	35	0	0	0	55	55	55	25	55	55	
Amber [s]	4.0	4.0	4.0	0.0	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	
Split [s]	30	30	30	0	0	0	30	30	30	30	30	30	
Vehicle Extension [s]	2.5	2.5	2.5	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	
Walk [s]	5	5	5	0	0	0	5	5	5	0	5	5	
Pedestrian Clearance [s]	12	12	12	0	0	0	13	13	13	0	13	13	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Rest In Walk		No						No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	
I2, Clearance Lost Time [s]	2.5	2.5	2.5	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	
Minimum Recall		No						Yes		No	Yes		
Maximum Recall		No						No		No	No		
Pedestrian Recall		No						No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	C	R		C	L	C
C, Cycle Length [s]	80	80		80	80	80
L, Total Lost Time per Cycle [s]	4.50	4.50		4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50		2.50	0.00	2.50
g_i, Effective Green Time [s]	12	12		46	54	50
g / C, Green / Cycle	0.15	0.15		0.57	0.68	0.62
(v / s)_i Volume / Saturation Flow Rate	0.02	0.13		0.28	0.14	0.07
s, saturation flow rate [veh/h]	1814	1581		1624	1037	1780
c, Capacity [veh/h]	279	243		966	672	1106
d1, Uniform Delay [s]	29.51	32.87		10.40	4.54	6.19
k, delay calibration	0.08	0.08		0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	4.90		0.26	0.11	0.03
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.81		0.46	0.21	0.11
d, Delay for Lane Group [s/veh]	29.70	37.77		10.66	4.66	6.22
Lane Group LOS	C	D		B	A	A
Critical Lane Group	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.73	4.00		4.36	0.71	0.75
50th-Percentile Queue Length [ft/ln]	18.24	99.94		109.04	17.69	18.81
95th-Percentile Queue Length [veh/ln]	1.31	7.20		7.79	1.27	1.35
95th-Percentile Queue Length [ft/ln]	32.83	179.89		194.67	31.84	33.86

**Movement, Approach, & Intersection Results**

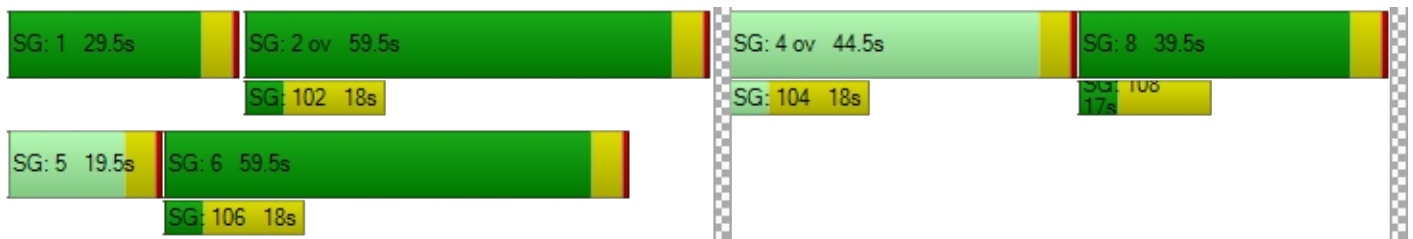
d_M, Delay for Movement [s/veh]	29.70	29.70	37.77	0.00	0.00	0.00	10.66	10.66	10.66	4.66	6.22	6.22
Movement LOS	C	C	D				B	B	B	A	A	A
d_A, Approach Delay [s/veh]	36.33			0.00			10.66			5.38		
Approach LOS	D			A			B			A		
d_I, Intersection Delay [s/veh]	15.74											
Intersection LOS	B											
Intersection V/C	0.217											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.65	31.65	31.65	31.65
I_p,int, Pedestrian LOS Score for Intersection	2.225	1.419	1.958	2.114
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	872	0	1370	1370
d_b, Bicycle Delay [s]	12.77	40.15	4.00	3.98
I_b,int, Bicycle LOS Score for Intersection	1.957	4.132	2.297	1.989
Bicycle LOS	A	D	B	A

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 103: 30th St & Harrison Blvd**

Control Type: Two-way stop  
 Analysis Method: HCM 6th Edition  
 Analysis Period: 15 minutes

Delay (sec / veh): 53.4  
 Level Of Service: F  
 Volume to Capacity (v/c): 0.035

**Intersection Setup**

Name	30th St			30th St			Harrison Blvd			Harrison Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Harrison Blvd			Harrison Blvd		
Base Volume Input [veh/h]	3	7	66	2	15	7	1	273	13	252	203	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	7	66	2	15	7	1	273	13	252	203	3
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	21	1	5	2	0	88	4	81	65	1
Total Analysis Volume [veh/h]	4	9	85	3	19	9	1	350	17	323	260	4
Pedestrian Volume [ped/h]	7			7			3			7		

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**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.04	0.08	0.13	0.04	0.16	0.01	0.00	0.00	0.00	0.27	0.00	0.00
d_M, Delay for Movement [s/veh]	45.39	38.15	13.26	53.44	41.81	15.96	7.78	0.00	0.00	9.21	0.00	0.00
Movement LOS	E	E	B	F	E	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.95	0.95	0.95	0.75	0.75	0.75	0.00	0.00	0.00	1.12	0.00	0.00
95th-Percentile Queue Length [ft/ln]	23.67	23.67	23.67	18.77	18.77	18.77	0.06	0.06	0.06	28.08	0.00	0.00
d_A, Approach Delay [s/veh]	16.86			35.43			0.02			5.07		
Approach LOS	C			E			A			A		
d_I, Intersection Delay [s/veh]	5.29											
Intersection LOS	F											

**Intersection Level Of Service Report**  
**Intersection 104: 29th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

**Intersection Setup**

Name	29th St			Harrison Blvd			Harrison Blvd			29th St		
Approach	Southbound			Eastbound			Westbound			Northwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	29th St			Harrison Blvd			Harrison Blvd			29th St		
Base Volume Input [veh/h]	67	87	147	66	234	39	0	307	28	9	20	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	0.00	3.00	1.00	5.00	0.00	5.00	4.00	11.00	20.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	87	147	66	234	39	0	307	28	9	20	19
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8400	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	27	45	20	71	12	0	94	9	3	6	6
Total Analysis Volume [veh/h]	82	106	179	80	285	48	0	374	34	11	24	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	19			20			13			12		
v_di, Inbound Pedestrian Volume crossing in	20			19			12			13		
v_co, Outbound Pedestrian Volume crossing	3			1			2			2		
v_ci, Inbound Pedestrian Volume crossing mi	2			2			3			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	40			3			4			6		

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**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	93
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	19.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	18.00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	8	1	6	6	2	2	2	7	4	4	
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-	
Minimum Green [s]	3	5	5	3	5	5	5	5	5	3	5	5	
Maximum Green [s]	15	20	20	15	25	25	25	25	25	15	20	20	
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Split [s]	30	30	30	30	30	30	30	30	30	30	0	0	
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0
Walk [s]	0	5	5	0	5	5	5	5	5	0	5	5	
Pedestrian Clearance [s]	0	16	16	0	20	20	15	15	15	0	12	12	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Rest In Walk		No			No			No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Minimum Recall	No	No		No	No			No		No	No		
Maximum Recall	No	No		No	No			No		No	No		
Pedestrian Recall	No	No		No	No			No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	0.0	0.0	0.0	6.0	6.0	6.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	L	C
C, Cycle Length [s]	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.50	0.00	2.50	2.50	0.00	2.50
g_i, Effective Green Time [s]	19	14	21	21	15	19	12
g / C, Green / Cycle	0.38	0.28	0.44	0.44	0.30	0.38	0.24
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.08	0.20	0.25	0.01	0.04
s, saturation flow rate [veh/h]	1345	1384	1036	1647	1613	1003	1267
c, Capacity [veh/h]	691	390	454	718	477	419	303
d1, Uniform Delay [s]	9.94	16.01	9.80	9.84	16.36	10.35	14.82
k, delay calibration	0.08	0.08	0.08	0.08	0.08	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	1.97	0.14	0.35	3.39	0.02	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.73	0.18	0.46	0.86	0.03	0.16
d, Delay for Lane Group [s/veh]	10.00	17.99	9.94	10.19	19.76	10.38	15.06
Lane Group LOS	A	B	A	B	B	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	2.78	0.44	2.18	4.25	0.07	0.40
50th-Percentile Queue Length [ft/ln]	12.76	69.55	11.07	54.46	106.35	1.68	9.94
95th-Percentile Queue Length [veh/ln]	0.92	5.01	0.80	3.92	7.64	0.12	0.72
95th-Percentile Queue Length [ft/ln]	22.97	125.19	19.93	98.04	190.91	3.02	17.89



**Movement, Approach, & Intersection Results**

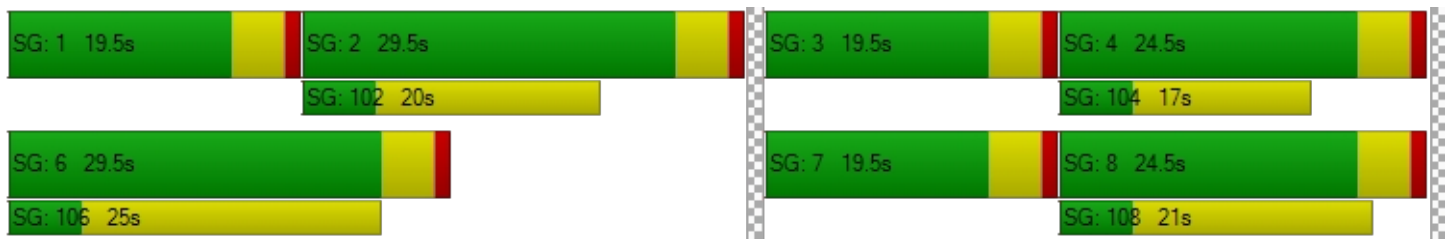
d_M, Delay for Movement [s/veh]	10.00	17.99	17.99	9.94	10.19	10.19	0.00	19.76	19.76	10.38	15.06	15.06
Movement LOS	A	B	B	A	B	B		B	B	B	B	B
d_A, Approach Delay [s/veh]	16.20			10.14			19.76			14.17		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.26											
Intersection LOS	B											
Intersection V/C	0.784											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	16.41	16.41	16.41	16.41
I_p,int, Pedestrian LOS Score for Intersection	2.085	2.304	2.041	1.967
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	814	1017	1017	814
d_b, Bicycle Delay [s]	8.83	5.95	5.95	8.68
I_b,int, Bicycle LOS Score for Intersection	2.165	2.241	2.233	1.655
Bicycle LOS	B	B	B	A

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 105: 30th St & Orchard Ave**

Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

**Intersection Setup**

Name	30th St			30th St			Orchard Ave			Orchard Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Orchard Ave			Orchard Ave		
Base Volume Input [veh/h]	11	82	38	21	267	18	11	18	8	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	3.00	0.00	0.00	6.00	27.00	17.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	82	38	21	267	18	11	18	8	0	0	0
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	24	11	6	78	5	3	5	2	0	0	0
Total Analysis Volume [veh/h]	13	95	44	24	310	21	13	21	9	0	0	0
Pedestrian Volume [ped/h]	52			28			32			34		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.00	0.04	0.06	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.11	0.00	0.00	7.67	0.00	0.00	16.10	16.14	12.14	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A	C	C	B			
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.05	0.05	0.05	0.37	0.37	0.37	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.84	0.84	0.84	1.33	1.33	1.33	9.15	9.15	9.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.69			0.52			15.29			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	1.72											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 106: 26th St & Monroe Ave**

Control Type:	All-way stop	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

**Intersection Setup**

Name	26th St			26th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	8	4	24	2	0	12	1	83	14	5	112	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	0.00	42.00	0.00	0.00	0.00	0.00	6.00	7.00	0.00	4.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	4	24	2	0	12	1	83	14	5	112	0
Peak Hour Factor	0.7300	0.7300	0.7300	0.7300	0.8700	0.7300	0.8700	0.7300	0.7300	0.7300	0.7300	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	1	8	1	0	4	0	28	5	2	38	0
Total Analysis Volume [veh/h]	11	5	33	3	0	16	1	114	19	7	153	0
Pedestrian Volume [ped/h]	48			27			86			124		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	762	889	875	869
Degree of Utilization, x	0.06	0.02	0.15	0.18

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.21	0.07	0.53	0.67
95th-Percentile Queue Length [ft]	5.14	1.64	13.37	16.80
Approach Delay [s/veh]	8.05	7.14	7.85	8.07
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.94			
Intersection LOS	A			

**Intersection Level Of Service Report  
Intersection 107: 25th St & Monroe Ave**

Control Type:	Two-way stop	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

**Intersection Setup**

Name	25th St/Park Terrace Pl			25th St/Park Terrace Pl			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	25th St/Park Terrace Pl			25th St/Park Terrace Pl			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	1	2	4	9	9	15	5	107	24	49	82	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	22.00	0.00	0.00	0.00	13.00	0.00	0.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	2	4	9	9	15	5	107	24	49	82	8
Peak Hour Factor	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000	0.7000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	1	3	3	5	2	38	9	18	29	3
Total Analysis Volume [veh/h]	1	3	6	13	13	21	7	153	34	70	117	11
Pedestrian Volume [ped/h]	54			22			67			23		

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**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.05	0.05	0.03	0.00	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	15.86	14.14	10.00	19.34	19.78	11.04	7.56	0.00	0.00	8.00	0.00	0.00
Movement LOS	C	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.42	0.42	0.42	0.01	0.01	0.01	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	1.42	1.42	1.42	10.43	10.43	10.43	0.37	0.37	0.37	4.36	4.36	4.36
d_A, Approach Delay [s/veh]	11.83			15.75			0.27			2.83		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	3.28											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 108: Kings Blvd & Monroe Ave**

Control Type:	All-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.226

**Intersection Setup**

Name	Kings Blvd		Monroe Ave		Monroe Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↔		↕		↔	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Kings Blvd		Monroe Ave		Monroe Ave	
Base Volume Input [veh/h]	42	44	15	124	128	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	15.00	2.00	0.00	14.00	9.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	44	15	124	128	25
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	13	5	37	39	8
Total Analysis Volume [veh/h]	51	53	18	149	154	30
Pedestrian Volume [ped/h]	32		58		57	



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	775	783	814
Degree of Utilization, x	0.13	0.21	0.23

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.46	0.80	0.87
95th-Percentile Queue Length [ft]	11.56	20.12	21.66
Approach Delay [s/veh]	8.36	8.84	8.71
Approach LOS	A	A	A
Intersection Delay [s/veh]	8.68		
Intersection LOS	A		

**Intersection Level Of Service Report**  
**Intersection 109: 14th St & Monroe Ave**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.279

**Intersection Setup**

Name	14th St			14th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	14th St			14th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	67	62	53	7	109	8	4	78	94	63	105	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	5.00	4.00	0.00	2.00	0.00	0.00	18.00	6.00	0.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	62	53	7	109	8	4	78	94	63	105	5
Peak Hour Factor	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	20	17	2	35	3	1	25	31	20	34	2
Total Analysis Volume [veh/h]	87	81	69	9	142	10	5	101	122	82	136	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	11			12			10			12		
v_di, Inbound Pedestrian Volume crossing in	10			12			11			12		
v_co, Outbound Pedestrian Volume crossing	6			18			19			6		
v_ci, Inbound Pedestrian Volume crossing mi	6			19			18			6		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	11			12			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	93
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	4	4	2	8	8	8	2	2	2	6	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	3	3	3	3	3	3	3	3	3	3	3	3
Maximum Green [s]	40	40	45	40	40	40	45	45	45	45	45	45
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	44	44	49	44	44	44	49	49	49	49	49	49
Vehicle Extension [s]	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Walk [s]	5	5	5	5	5	5	5	5	5	5	5	5
Pedestrian Clearance [s]	9	9	9	9	9	9	9	9	9	9	9	9
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall		No	No		Yes			No			Yes	
Maximum Recall		Yes	Yes		No			Yes			No	
Pedestrian Recall		No	No		No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	6.0	6.0	6.0	20.0	20.0	20.0	20.0	20.0	20.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	C	L	C	L	C
C, Cycle Length [s]	93	93	93	93	93	93	93	93
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	45	40	45	45	45	45
g / C, Green / Cycle	0.43	0.43	0.48	0.43	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.04	0.09	0.00	0.15	0.07	0.08
s, saturation flow rate [veh/h]	1225	1825	1564	1822	1253	1442	1171	1776
c, Capacity [veh/h]	512	785	757	824	601	698	517	859
d1, Uniform Delay [s]	17.46	15.80	12.96	16.55	15.80	14.65	19.48	13.46
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.26	0.24	0.04	0.03	1.21	0.05	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.10	0.09	0.20	0.01	0.32	0.16	0.17
d, Delay for Lane Group [s/veh]	18.18	16.07	13.20	16.59	15.83	15.86	19.54	13.50
Lane Group LOS	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.32	1.08	0.82	2.14	0.07	3.11	1.20	1.66
50th-Percentile Queue Length [ft/ln]	32.94	27.00	20.52	53.46	1.69	77.73	29.88	41.39
95th-Percentile Queue Length [veh/ln]	2.37	1.94	1.48	3.85	0.12	5.60	2.15	2.98
95th-Percentile Queue Length [ft/ln]	59.30	48.60	36.93	96.22	3.03	139.92	53.78	74.50

**Movement, Approach, & Intersection Results**

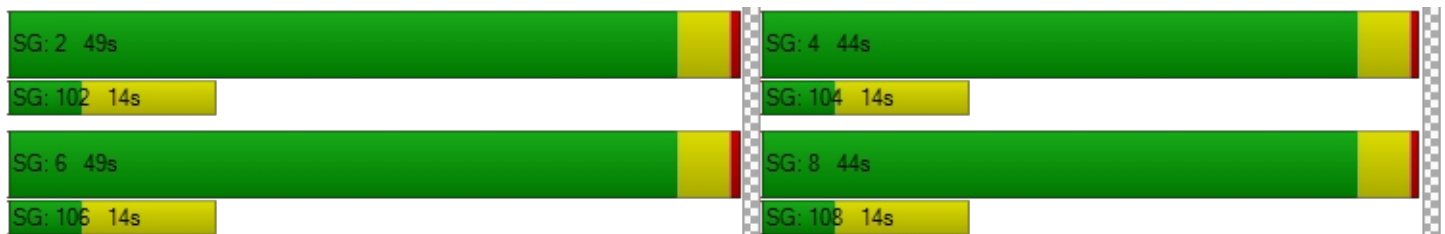
d_M, Delay for Movement [s/veh]	18.18	16.07	13.20	16.59	16.59	16.59	15.83	15.86	15.86	19.54	13.50	13.50
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.01			16.59			15.86			15.71		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.279											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.94	37.94	37.94	37.94
I_p,int, Pedestrian LOS Score for Intersection	2.369	1.828	2.167	2.065
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	860	968	968
d_b, Bicycle Delay [s]	15.19	15.19	12.46	12.53
I_b,int, Bicycle LOS Score for Intersection	1.951	1.825	1.936	1.929
Bicycle LOS	A	A	A	A

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 110: 35th St & Campus Way**

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

**Intersection Setup**

Name	35th St			35th St			Campus Way			Campus Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Campus Way			Campus Way		
Base Volume Input [veh/h]	9	193	73	31	245	7	2	1	1	5	1	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	5.00	3.00	3.00	14.00	0.00	0.00	0.00	0.00	0.00	20.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	193	73	31	245	7	2	1	1	5	1	5
Peak Hour Factor	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700	0.7700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	63	24	10	80	2	1	0	0	2	0	2
Total Analysis Volume [veh/h]	12	251	95	40	318	9	3	1	1	6	1	6
Pedestrian Volume [ped/h]	3			30			0			15		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.01
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	8.17	0.00	0.00	17.16	17.00	10.17	16.79	16.46	10.99
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.11	0.11	0.11	0.04	0.04	0.04	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.73	0.73	0.73	2.64	2.64	2.64	1.12	1.12	1.12	2.46	2.46	2.46
d_A, Approach Delay [s/veh]	0.27			0.89			15.73			14.09		
Approach LOS	A			A			C			B		
d_I, Intersection Delay [s/veh]	0.92											
Intersection LOS	C											



**Intersection Level Of Service Report  
Intersection 111: 35th St & Jefferson Way**

Control Type:	Two-way stop	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.101

**Intersection Setup**

Name	35th St			35th St			Jefferson Way			Jefferson Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			15.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Jefferson Way			Jefferson Way		
Base Volume Input [veh/h]	20	271	32	13	231	8	2	0	2	21	8	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	6.00	0.00	2.00	0.00	0.00	0.00	0.00	24.00	12.00	36.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	271	32	13	231	8	2	0	2	21	8	11
Peak Hour Factor	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800	0.7800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	87	10	4	74	3	1	0	1	7	3	4
Total Analysis Volume [veh/h]	26	347	41	17	296	10	3	0	3	27	10	14
Pedestrian Volume [ped/h]	7			7			1			21		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.10	0.03	0.02
d_M, Delay for Movement [s/veh]	7.91	0.00	0.00	8.21	0.00	0.00	17.56	17.08	10.06	20.57	19.33	13.43
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.56	0.56	0.56
95th-Percentile Queue Length [ft/ln]	1.57	1.57	1.57	1.14	1.14	1.14	1.10	1.10	1.10	13.98	13.98	13.98
d_A, Approach Delay [s/veh]	0.50			0.43			13.81			18.37		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.72											
Intersection LOS	C											

**Intersection Level Of Service Report**  
**Intersection 112: 14th St & Jefferson Way**

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.258

**Intersection Setup**

Name	15th St			Jefferson Way			Jefferson Way			14th St		
Approach	Northbound			Eastbound			Westbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			15.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St			Jefferson Way			Jefferson Way			14th St		
Base Volume Input [veh/h]	17	177	28	12	3	1	40	31	11	10	186	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	35.00	2.00	11.00	0.00	0.00	0.00	10.00	3.00	9.00	10.00	5.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	177	28	12	3	1	40	31	11	10	186	27
Peak Hour Factor	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600	0.7600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	58	9	4	1	0	13	10	4	3	61	9
Total Analysis Volume [veh/h]	22	233	37	16	4	1	53	41	14	13	245	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	39			47			39			47		
v_di, Inbound Pedestrian Volume crossing in	39			47			39			47		
v_co, Outbound Pedestrian Volume crossing	112			112			55			55		
v_ci, Inbound Pedestrian Volume crossing mi	112			112			55			55		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	31			5			21			39		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	50
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	4	4	4	6	6	6	2	2	2	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	5	5	5	5
Maximum Green [s]	25	25	25	25	25	25	25	25	25	25	25	25
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Walk [s]	5	5	5	5	5	5	5	5	5	5	5	5
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	0.0	0.0	0.0	20.0	20.0	20.0	20.0	20.0	20.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C
C, Cycle Length [s]	49	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
g_i, Effective Green Time [s]	20	20	20	20	20	20	20	20	20
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.01	0.00	0.05	0.02	0.01	0.01	0.16
s, saturation flow rate [veh/h]	757	1781	1222	1678	977	1855	1442	982	1734
c, Capacity [veh/h]	342	728	589	686	512	758	589	409	709
d1, Uniform Delay [s]	13.96	10.16	10.16	8.65	10.21	8.81	8.70	13.39	10.29
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.12	0.01	0.00	0.03	0.01	0.01	0.01	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.37	0.03	0.01	0.10	0.05	0.02	0.03	0.40
d, Delay for Lane Group [s/veh]	13.99	10.28	10.16	8.65	10.24	8.83	8.71	13.40	10.42
Lane Group LOS	B	B	B	A	B	A	A	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.17	1.75	0.11	0.03	0.36	0.25	0.08	0.10	1.84
50th-Percentile Queue Length [ft/ln]	4.30	43.71	2.66	0.74	9.00	6.21	2.10	2.45	46.09
95th-Percentile Queue Length [veh/ln]	0.31	3.15	0.19	0.05	0.65	0.45	0.15	0.18	3.32
95th-Percentile Queue Length [ft/ln]	7.75	78.67	4.80	1.34	16.20	11.18	3.78	4.41	82.95

**Movement, Approach, & Intersection Results**

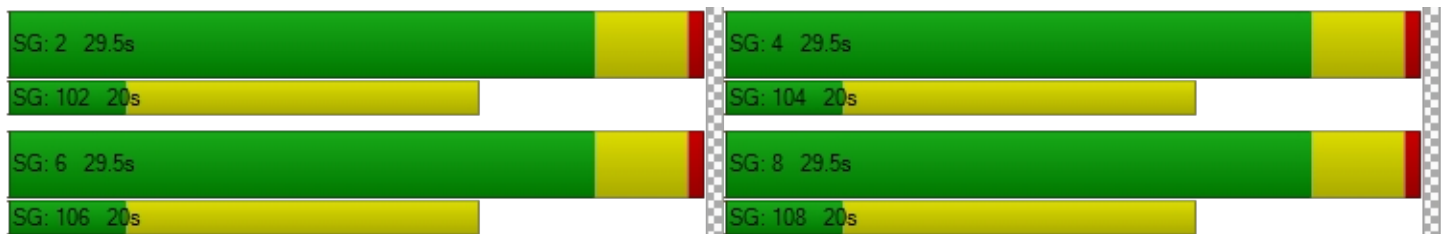
d_M, Delay for Movement [s/veh]	13.99	10.28	10.28	10.16	8.65	8.65	10.24	8.83	8.71	13.40	10.42	10.42
Movement LOS	B	B	B	B	A	A	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	10.56			9.80			9.50			10.55		
Approach LOS	B			A			A			B		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	B											
Intersection V/C	0.258											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	147.63	0.00	0.00
d_p, Pedestrian Delay [s]	16.40	16.40	16.40	16.40
I_p,int, Pedestrian LOS Score for Intersection	2.145	1.960	2.139	2.083
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1017	1017	1017	1017
d_b, Bicycle Delay [s]	6.03	5.95	6.00	6.05
I_b,int, Bicycle LOS Score for Intersection	2.041	1.594	1.738	2.045
Bicycle LOS	B	A	A	B

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 113: 11th St & Jefferson Ave**

Control Type:	Two-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

**Intersection Setup**

Name	11th St			11th Street			Jefferson Ave			Jefferson Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	11th St			11th Street			Jefferson Ave			Jefferson Ave		
Base Volume Input [veh/h]	3	52	31	4	70	6	9	20	1	47	81	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	0.00	0.00	0.00	0.00	15.00	0.00	2.00	7.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	52	31	4	70	6	9	20	1	47	81	1
Peak Hour Factor	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100	0.7100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	18	11	1	25	2	3	7	0	17	29	0
Total Analysis Volume [veh/h]	4	73	44	6	99	8	13	28	1	66	114	1
Pedestrian Volume [ped/h]	33			8			16			8		



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**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.14	0.05	0.01	0.19	0.01	0.01	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	14.60	13.21	10.13	14.39	13.55	10.77	7.48	0.00	0.00	7.52	0.00	0.00
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.71	0.71	0.71	0.78	0.78	0.78	0.03	0.03	0.03	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	17.79	17.79	17.79	19.51	19.51	19.51	0.67	0.67	0.67	3.47	3.47	3.47
d_A, Approach Delay [s/veh]	12.13			13.40			2.31			2.74		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	7.83											
Intersection LOS	B											

**Intersection Level Of Service Report**  
**Intersection 114: 9th St & Jefferson Ave**

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.336

**Intersection Setup**

Name	9th Ave			9th Ave			Jefferson Ave			Jefferson Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+r			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	9th Ave			9th Ave			Jefferson Ave			Jefferson Ave		
Base Volume Input [veh/h]	2	41	3	31	46	75	38	14	0	2	56	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	3.00	8.00	0.00	0.00	0.00	9.00	31.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	41	3	31	46	75	38	14	0	2	56	32
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	12	1	9	14	23	11	4	0	1	17	10
Total Analysis Volume [veh/h]	2	49	4	37	55	90	46	17	0	2	67	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5			0			1			6		
v_di, Inbound Pedestrian Volume crossing in	6			1			0			5		
v_co, Outbound Pedestrian Volume crossing	7			2			6			1		
v_ci, Inbound Pedestrian Volume crossing mi	6			1			7			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			0			1			7		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	2	2	2	6	6	6	4	4	4	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	4	4	4	4	4	4	4	4	4	4	4	4
Maximum Green [s]	31	31	31	30	30	30	50	50	50	50	50	50
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	4.3	4.3	4.3	4.3	4.3	4.3
Walk [s]	4	4	4	4	4	4	4	4	4	4	4	4
Pedestrian Clearance [s]	10	10	10	10	10	10	12	12	12	12	12	12
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	C
C, Cycle Length [s]	12	12	12	12	12
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50
g_i, Effective Green Time [s]	2	2	2	1	1
g / C, Green / Cycle	0.16	0.16	0.16	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	1.38	0.05	0.06	0.03	0.06
s, saturation flow rate [veh/h]	40	1856	1572	1801	1759
c, Capacity [veh/h]	299	705	255	710	500
d1, Uniform Delay [s]	6.25	4.61	4.65	5.04	5.18
k, delay calibration	0.10	0.08	0.08	0.17	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.06	0.61	0.08	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.13	0.35	0.09	0.22
d, Delay for Lane Group [s/veh]	6.53	4.67	5.26	5.13	5.52
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.07	0.03	0.07	0.07	0.14
50th-Percentile Queue Length [ft/ln]	1.70	0.86	1.64	1.78	3.59
95th-Percentile Queue Length [veh/ln]	0.12	0.06	0.12	0.13	0.26
95th-Percentile Queue Length [ft/ln]	3.06	1.54	2.95	3.21	6.46

**Movement, Approach, & Intersection Results**

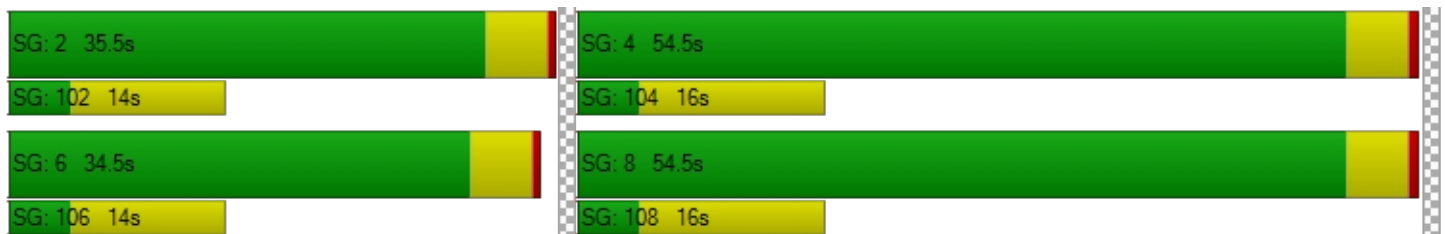
d_M, Delay for Movement [s/veh]	6.53	6.53	6.53	4.67	4.67	5.26	5.13	5.13	5.13	5.52	5.52	5.52
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	6.53			4.96			5.13			5.52		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.35											
Intersection LOS	A											
Intersection V/C	0.336											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	8.0	8.0	8.0	8.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.77	0.77	0.77	0.77
I_p,int, Pedestrian LOS Score for Intersection	1.610	1.938	1.619	1.655
Crosswalk LOS	A	A	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	5015	4853	8089	8089
d_b, Bicycle Delay [s]	14.06	12.58	57.32	57.49
I_b,int, Bicycle LOS Score for Intersection	1.650	1.860	1.664	1.738
Bicycle LOS	A	A	A	A

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 115: 9th St & Monroe Ave**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

**Intersection Setup**

Name	9th St			9th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	9th St			9th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	16	84	9	26	160	96	33	71	14	3	53	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	38.00	5.00	33.00	12.00	2.00	1.00	3.00	23.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	84	9	26	160	96	33	71	14	3	53	11
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	23	2	7	43	26	9	19	4	1	14	3
Total Analysis Volume [veh/h]	17	91	10	28	174	104	36	77	15	3	58	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	15			6			6			15		
v_di, Inbound Pedestrian Volume crossing in	15			6			6			15		
v_co, Outbound Pedestrian Volume crossing	14			9			13			8		
v_ci, Inbound Pedestrian Volume crossing mi	13			8			14			9		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			3			6			8		



Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	98
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	2	2	2	6	6	6	4	4	4	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	4	4	4	4	4	4	4	4	4	4	4	4
Maximum Green [s]	45	45	45	45	45	45	45	45	45	45	45	45
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	6	6	6	6	6	6	6	6	6	6	6	6
Pedestrian Clearance [s]	14	14	14	14	14	14	14	14	14	14	14	14
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	20.0	20.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	R	L	C	C	R
C, Cycle Length [s]	98	98	98	98	98	98	98	98
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	45	45	45	45	45	45
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.11	0.07	0.03	0.06	0.03	0.01
s, saturation flow rate [veh/h]	1484	1602	1787	1546	1323	1496	1883	1572
c, Capacity [veh/h]	729	735	862	710	630	687	903	722
d1, Uniform Delay [s]	14.87	14.88	16.07	15.33	16.90	15.27	14.81	14.44
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.21	0.64	0.43	0.17	0.41	0.14	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.08	0.23	0.15	0.06	0.13	0.07	0.02
d, Delay for Lane Group [s/veh]	15.09	15.09	16.70	15.76	17.07	15.68	14.95	14.48
Lane Group LOS	B	B	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.78	0.78	2.88	1.43	0.52	1.26	0.80	0.15
50th-Percentile Queue Length [ft/ln]	19.58	19.47	72.12	35.69	12.88	31.50	19.91	3.86
95th-Percentile Queue Length [veh/ln]	1.41	1.40	5.19	2.57	0.93	2.27	1.43	0.28
95th-Percentile Queue Length [ft/ln]	35.25	35.04	129.81	64.24	23.19	56.70	35.84	6.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.09	15.09	15.09	16.70	16.70	15.76	17.07	15.68	15.68	14.95	14.95	14.48
Movement LOS	B	B	B	B	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.09			16.38			16.07			14.87		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.90											
Intersection LOS	B											
Intersection V/C	0.190											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	39.51	39.51	39.51	39.51
I_p,int, Pedestrian LOS Score for Intersection	2.033	2.277	2.052	2.036
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	918	918	918	918
d_b, Bicycle Delay [s]	14.33	14.35	14.37	14.39
I_b,int, Bicycle LOS Score for Intersection	1.657	2.065	1.771	1.680
Bicycle LOS	A	B	A	A

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 116: 30th St & Washington Way**

Control Type:	All-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.209

**Intersection Setup**

Name	30th St			30th St			Washington Way			Washington Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Washington Way			Washington Way		
Base Volume Input [veh/h]	15	110	11	28	103	6	14	61	46	13	36	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.00	0.00	11.00	1.00	17.00	0.00	10.00	0.00	0.00	6.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	110	11	28	103	6	14	61	46	13	36	47
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	32	3	8	30	2	4	18	13	4	10	14
Total Analysis Volume [veh/h]	17	126	13	32	118	7	16	70	53	15	41	54
Pedestrian Volume [ped/h]	21			7			17			49		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	758	752	767	776
Degree of Utilization, x	0.21	0.21	0.18	0.14

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.77	0.78	0.66	0.49
95th-Percentile Queue Length [ft]	19.24	19.57	16.47	12.32
Approach Delay [s/veh]	8.98	9.04	8.73	8.41
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.82			
Intersection LOS	A			

**Intersection Level Of Service Report**  
**Intersection 117: 26th St & Washington Way**

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.197

**Intersection Setup**

Name	26th St			NW 26th St			Washington Way			Washington Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			15.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			NW 26th St			Washington Way			Washington Way		
Base Volume Input [veh/h]	21	39	12	14	24	5	7	69	23	47	72	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	33.00	0.00	7.00	33.00	0.00	0.00	6.00	4.00	0.00	3.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	39	12	14	24	5	7	69	23	47	72	24
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	11	3	4	7	1	2	20	7	13	20	7
Total Analysis Volume [veh/h]	24	44	14	16	27	6	8	78	26	53	82	27
Pedestrian Volume [ped/h]	42			27			111			99		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	622	660	614	647	818	821
Degree of Utilization, x	0.04	0.09	0.03	0.05	0.14	0.20

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.29	0.08	0.16	0.47	0.73
95th-Percentile Queue Length [ft]	3.00	7.20	2.00	4.03	11.83	18.27
Approach Delay [s/veh]	8.69		8.62		8.09	8.46
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	8.42					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 118: 17th St & Washington Way**

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

**Intersection Setup**

Name	17th St		Washington Way		Washington Way	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	17th St		Washington Way		Washington Way	
Base Volume Input [veh/h]	4	11	87	11	5	143
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	25.00	9.00	5.00	9.00	0.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	11	87	11	5	143
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	25	3	1	42
Total Analysis Volume [veh/h]	5	13	101	13	6	166
Pedestrian Volume [ped/h]	8		0		110	



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**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.73	10.23	0.00	0.00	7.46	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	2.01	2.01	0.00	0.00	0.31	0.31
d_A, Approach Delay [s/veh]	10.37		0.00		0.26	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	B					

**Intersection Level Of Service Report  
Intersection 119: 15th St & Washington Way**

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.252

**Intersection Setup**

Name	15th St		Washington Way	
Approach	Northbound		Southbound	
Lane Configuration	↵		↵	
Turning Movement	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00
Speed [mph]	30.00		25.00	
Grade [%]	0.00		0.00	
Curb Present	No		No	
Crosswalk	Yes		Yes	

**Volumes**

Name			15th St		Washington Way	
Base Volume Input [veh/h]	57	265	133	110	62	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	12.00	5.00	12.00	1.00	5.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	265	133	110	62	16
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	80	40	33	19	5
Total Analysis Volume [veh/h]	69	319	160	133	75	19
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		21		0	
v_di, Inbound Pedestrian Volume crossing in	0		20		0	
v_co, Outbound Pedestrian Volume crossing	20		19		19	
v_ci, Inbound Pedestrian Volume crossing mi	21		19		19	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	39		22		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

**Phasing & Timing**

Control Type	ProtPerm	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	3	10	10	0	3	0
Maximum Green [s]	15	40	40	0	25	0
Amber [s]	4.0	4.0	4.0	0.0	4.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	2.5	0.0	2.5	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	14	14	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	Yes	Yes		Yes	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	6.0	0.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	48	48	40	40	25	25
g / C, Green / Cycle	0.58	0.58	0.48	0.48	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.06	0.17	0.09	0.09	0.05	0.01
s, saturation flow rate [veh/h]	1191	1825	1720	1482	1610	1579
c, Capacity [veh/h]	752	1055	829	715	485	476
d1, Uniform Delay [s]	7.84	8.95	12.27	12.13	21.24	20.49
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.74	0.52	0.58	0.68	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.30	0.19	0.19	0.15	0.04
d, Delay for Lane Group [s/veh]	8.09	9.68	12.79	12.71	21.92	20.65
Lane Group LOS	A	A	B	B	C	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	2.86	1.75	1.46	1.15	0.28
50th-Percentile Queue Length [ft/ln]	13.58	71.49	43.84	36.44	28.69	6.97
95th-Percentile Queue Length [veh/ln]	0.98	5.15	3.16	2.62	2.07	0.50
95th-Percentile Queue Length [ft/ln]	24.44	128.68	78.90	65.59	51.65	12.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.09	9.68	12.79	12.71	21.92	20.65
Movement LOS	A	A	B	B	C	C
d_A, Approach Delay [s/veh]	9.40		12.75		21.66	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	12.15					
Intersection LOS	B					
Intersection V/C	0.252					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.95	32.95	32.95
I_p,int, Pedestrian LOS Score for Intersection	2.122	2.124	2.068
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	965	965	603
d_b, Bicycle Delay [s]	11.33	11.23	20.25
I_b,int, Bicycle LOS Score for Intersection	2.200	2.043	1.560
Bicycle LOS	B	B	A

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 120: 15th St & Washington Ave**

Control Type:	Two-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.159

**Intersection Setup**

Name	15th St			15th St			Washington Ave			Washington Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St			15th St			Washington Ave			Washington Ave		
Base Volume Input [veh/h]	0	232	91	26	200	0	0	1	3	39	0	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	2.00	0.00	6.00	0.00	0.00	0.00	100.00	5.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	232	91	26	200	0	0	1	3	39	0	11
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	71	28	8	61	0	0	0	1	12	0	3
Total Analysis Volume [veh/h]	0	283	111	32	244	0	0	1	4	48	0	13
Pedestrian Volume [ped/h]	0			42			44			76		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.16	0.00	0.02
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	8.63	0.00	0.00	17.40	18.64	11.71	19.35	19.93	14.08
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.10	0.10	0.10	0.03	0.03	0.03	0.66	0.66	0.66
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.42	2.42	2.42	0.84	0.84	0.84	16.51	16.51	16.51
d_A, Approach Delay [s/veh]	0.00			1.00			13.10			18.23		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.98											
Intersection LOS	C											



**Intersection Level Of Service Report**  
**Intersection 121: 35th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

**Intersection Setup**

Name	35th St			35th St			Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			←↑			←↑			←↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	60.00	100.00	100.00	120.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Western Blvd			Western Blvd		
Base Volume Input [veh/h]	23	171	63	54	80	50	152	373	38	41	106	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	13.00	2.00	5.00	11.00	2.00	8.00	4.00	2.00	3.00	10.00	7.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	171	63	54	80	50	152	373	38	41	106	66
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	53	20	17	25	16	48	117	12	13	33	21
Total Analysis Volume [veh/h]	29	214	79	68	100	63	190	466	48	51	133	83
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	5			1			2			5		
v_di, Inbound Pedestrian Volume crossing in	5			2			1			5		
v_co, Outbound Pedestrian Volume crossing	1			6			1			5		
v_ci, Inbound Pedestrian Volume crossing mi	1			5			1			6		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			3			10			1		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	114
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	24.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	15.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	3	10	10	3	10	10
Maximum Green [s]	40	40	40	40	40	40	20	40	40	20	40	40
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.6	4.6	2.5	4.6	4.6
Walk [s]	5	5	5	5	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	15	15	15	14	14	14	0	11	11	0	12	12
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0	2.5	3.0	3.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	43	43	43	43	43	43	43
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	0.00	3.00	0.00	3.00
g_i, Effective Green Time [s]	11	11	11	23	17	23	13
g / C, Green / Cycle	0.25	0.25	0.25	0.53	0.39	0.53	0.31
(v / s)_i Volume / Saturation Flow Rate	0.19	0.07	0.09	0.14	0.28	0.05	0.13
s, saturation flow rate [veh/h]	1665	1000	1728	1341	1833	972	1653
c, Capacity [veh/h]	506	193	431	846	722	566	518
d1, Uniform Delay [s]	15.01	14.65	13.43	5.59	11.02	6.16	11.71
k, delay calibration	0.08	0.08	0.08	0.19	0.19	0.08	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.81	0.41	0.24	2.33	0.05	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.35	0.38	0.22	0.71	0.09	0.42
d, Delay for Lane Group [s/veh]	16.00	15.46	13.84	5.83	13.35	6.21	12.66
Lane Group LOS	B	B	B	A	B	A	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.67	0.52	1.10	0.59	3.44	0.15	1.47
50th-Percentile Queue Length [ft/ln]	66.79	13.10	27.61	14.82	85.91	3.81	36.63
95th-Percentile Queue Length [veh/ln]	4.81	0.94	1.99	1.07	6.19	0.27	2.64
95th-Percentile Queue Length [ft/ln]	120.22	23.57	49.70	26.68	154.64	6.86	65.93

**Movement, Approach, & Intersection Results**

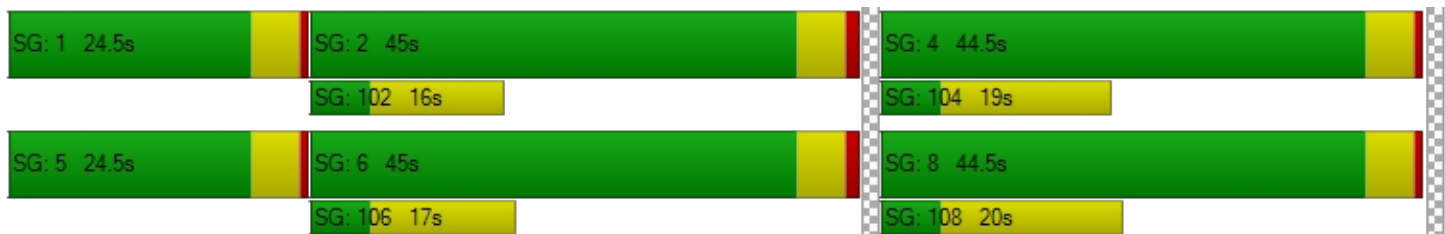
d_M, Delay for Movement [s/veh]	16.00	16.00	16.00	15.46	13.84	13.84	5.83	13.35	13.35	6.21	12.66	12.66
Movement LOS	B	B	B	B	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	16.00			14.32			11.32			11.43		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	12.78											
Intersection LOS	B											
Intersection V/C	0.753											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.48	13.48	13.48	13.48
l_p,int, Pedestrian LOS Score for Intersection	1.920	2.271	2.295	2.285
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1857	1857	1857	1857
d_b, Bicycle Delay [s]	0.11	0.11	0.11	0.11
l_b,int, Bicycle LOS Score for Intersection	2.091	1.941	2.721	2.000
Bicycle LOS	B	A	B	B

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 122: 30th St & Western Blvd**

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.157

**Intersection Setup**

Name	NW 30th St		Western Blvd		Western Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	NW 30th St		Western Blvd		Western Blvd	
Base Volume Input [veh/h]	24	19	140	352	198	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	11.00	1.00	5.00	5.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	19	140	352	198	123
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	6	44	110	62	38
Total Analysis Volume [veh/h]	30	24	175	440	248	154
Pedestrian Volume [ped/h]	8		1		4	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.16	0.04	0.15	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	27.30	10.47	8.71	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.54	0.11	0.54	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.59	2.73	13.46	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.82		2.48		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.42					
Intersection LOS	D					

**Intersection Level Of Service Report  
Intersection 123: 26th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.623

**Intersection Setup**

Name	26th St			26th St			Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name	26th St			26th St			Western Blvd			Western Blvd		
Base Volume Input [veh/h]	67	46	41	14	9	7	27	318	15	12	322	76
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	7.00	2.00	29.00	0.00	0.00	19.00	2.00	7.00	8.00	4.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	46	41	14	9	7	27	318	15	12	322	76
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	14	13	4	3	2	8	98	5	4	99	23
Total Analysis Volume [veh/h]	83	57	51	17	11	9	33	393	19	15	398	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			1			1			0		
v_di, Inbound Pedestrian Volume crossing in	1			0			1			1		
v_co, Outbound Pedestrian Volume crossing	24			18			18			25		
v_ci, Inbound Pedestrian Volume crossing mi	25			18			18			24		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	8			0			10			9		

Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	114
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	19.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	18.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	3	3	3	3	3	3	10	10	3	10	10
Maximum Green [s]	15	20	20	15	20	20	15	40	40	15	40	40
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	17	17	0	17	17	0	18	18	0	23	23
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.5	3.0	3.0	2.5	3.0	3.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	36	36	36	36	36	36	36	36	36	36
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	2	7	0	6	6	16	11	16	10	10
g / C, Green / Cycle	0.06	0.20	0.01	0.15	0.15	0.43	0.29	0.43	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.01	0.01	0.01	0.03	0.22	0.01	0.22	0.06
s, saturation flow rate [veh/h]	1795	1517	1395	1900	1427	1000	1851	1071	1840	1477
c, Capacity [veh/h]	108	306	19	294	221	543	543	564	517	415
d1, Uniform Delay [s]	16.88	12.52	17.97	13.11	13.10	6.81	11.72	6.75	12.02	10.04
k, delay calibration	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.14	0.51	60.91	0.04	0.06	0.03	1.65	0.01	1.83	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.77	0.35	0.91	0.04	0.04	0.06	0.76	0.03	0.77	0.23
d, Delay for Lane Group [s/veh]	25.02	13.03	78.88	13.15	13.16	6.85	13.37	6.76	13.85	10.24
Lane Group LOS	C	B	E	B	B	A	B	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.84	0.67	0.44	0.07	0.06	0.10	2.50	0.05	2.48	0.46
50th-Percentile Queue Length [ft/ln]	20.95	16.80	11.07	1.70	1.41	2.56	62.52	1.14	62.05	11.53
95th-Percentile Queue Length [veh/ln]	1.51	1.21	0.80	0.12	0.10	0.18	4.50	0.08	4.47	0.83
95th-Percentile Queue Length [ft/ln]	37.72	30.23	19.92	3.06	2.54	4.60	112.54	2.06	111.70	20.76

**Movement, Approach, & Intersection Results**

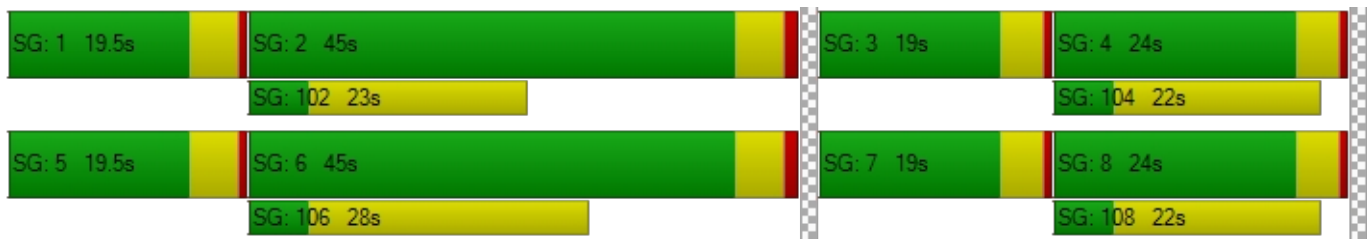
d_M, Delay for Movement [s/veh]	25.02	13.03	13.03	78.88	13.15	13.16	6.85	13.37	13.37	6.76	13.85	10.24
Movement LOS	C	B	B	E	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	18.24			43.35			12.88			12.97		
Approach LOS	B			D			B			B		
d_I, Intersection Delay [s/veh]	14.74											
Intersection LOS	B											
Intersection V/C	0.623											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	10.26	10.26	10.26	10.26
I_p,int, Pedestrian LOS Score for Intersection	1.962	2.142	2.195	2.318
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1102	1102	2205	2205
d_b, Bicycle Delay [s]	3.67	3.66	0.19	0.19
I_b,int, Bicycle LOS Score for Intersection	1.875	1.621	2.294	2.396
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	388	416	42	5	2
Future Vol, veh/h	5	388	416	42	5	2
Conflicting Peds, #/hr	17	0	0	17	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	0	3	4	0	40	0
Mvmt Flow	6	497	533	54	6	3

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	604	0	-	0	1086 578
Stage 1	-	-	-	-	577 -
Stage 2	-	-	-	-	509 -
Critical Hdwy	4.1	-	-	-	6.8 6.2
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.86 3.3
Pot Cap-1 Maneuver	984	-	-	-	203 519
Stage 1	-	-	-	-	494 -
Stage 2	-	-	-	-	533 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	970	-	-	-	195 511
Mov Cap-2 Maneuver	-	-	-	-	195 -
Stage 1	-	-	-	-	483 -
Stage 2	-	-	-	-	526 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	970	-	-	-	237
HCM Lane V/C Ratio	0.007	-	-	-	0.038
HCM Control Delay (s)	8.7	0	-	-	20.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

**Intersection Level Of Service Report**  
**Intersection 125: 15th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

**Intersection Setup**

Name	15th St						Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St						Western Blvd			Western Blvd		
Base Volume Input [veh/h]	79	148	23	23	56	63	110	241	26	30	330	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	5.00	4.00	17.00	2.00	18.00	6.00	3.00	8.00	10.00	2.00	9.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	148	23	23	56	63	110	241	26	30	330	55
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	45	7	7	17	19	34	73	8	9	101	17
Total Analysis Volume [veh/h]	96	180	28	28	68	77	134	294	32	37	402	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	27			7			7			28		
v_di, Inbound Pedestrian Volume crossing in	28			7			7			27		
v_co, Outbound Pedestrian Volume crossing	4			4			3			3		
v_ci, Inbound Pedestrian Volume crossing mi	3			3			4			4		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	29			4			3			11		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	18.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	15.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	5	4	5	5	4	10	10	4	10	10
Maximum Green [s]	15	20	20	15	20	20	15	40	40	15	40	40
Amber [s]	3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0
Walk [s]	0	6	6	0	6	6	0	6	6	0	6	6
Pedestrian Clearance [s]	0	11	11	0	11	11	0	10	10	0	10	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.5	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	3.50	4.00	3.50	4.00	3.50	4.00	3.50	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.50	2.00	1.50	2.00	1.50	2.00	1.50	2.00
g_i, Effective Green Time [s]	3	10	1	8	4	17	1	14
g / C, Green / Cycle	0.07	0.22	0.03	0.18	0.10	0.38	0.03	0.32
(v / s)_i Volume / Saturation Flow Rate	0.05	0.12	0.02	0.09	0.08	0.18	0.02	0.26
s, saturation flow rate [veh/h]	1795	1722	1567	1642	1724	1817	1667	1810
c, Capacity [veh/h]	125	378	42	290	173	697	56	573
d1, Uniform Delay [s]	20.36	15.42	21.47	16.55	19.53	10.31	21.27	14.04
k, delay calibration	0.04	0.11	0.04	0.11	0.04	0.11	0.04	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.69	1.25	6.71	1.33	2.77	0.49	4.96	2.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.77	0.55	0.67	0.50	0.77	0.47	0.66	0.82
d, Delay for Lane Group [s/veh]	24.05	16.67	28.19	17.89	22.30	10.80	26.23	17.00
Lane Group LOS	C	B	C	B	C	B	C	B
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.02	1.78	0.34	1.26	1.33	1.97	0.42	3.98
50th-Percentile Queue Length [ft/ln]	25.54	44.47	8.44	31.57	33.13	49.27	10.46	99.50
95th-Percentile Queue Length [veh/ln]	1.84	3.20	0.61	2.27	2.39	3.55	0.75	7.16
95th-Percentile Queue Length [ft/ln]	45.98	80.04	15.19	56.82	59.64	88.68	18.82	179.10

**Movement, Approach, & Intersection Results**

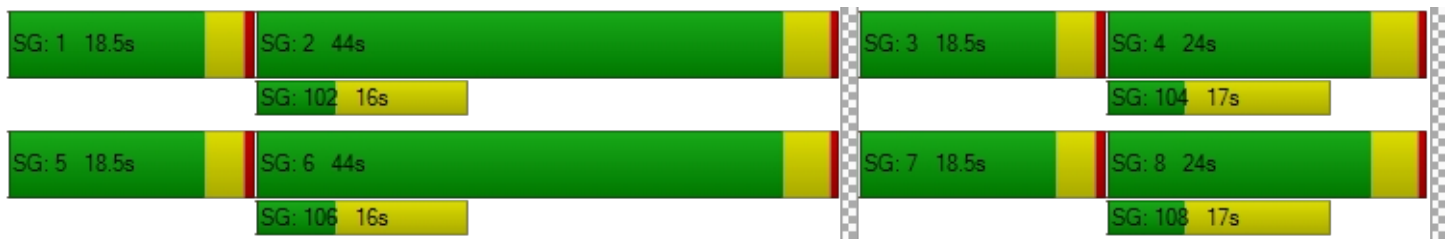
d_M, Delay for Movement [s/veh]	24.05	16.67	16.67	28.19	17.89	17.89	22.30	10.80	10.80	26.23	17.00	17.00
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.00			19.55			14.15			17.67		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.05											
Intersection LOS	B											
Intersection V/C	0.723											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.31	13.31	13.31	13.31
I_p,int, Pedestrian LOS Score for Intersection	2.021	2.081	2.238	2.180
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	902	902	1803	1803
d_b, Bicycle Delay [s]	6.79	6.70	0.21	0.22
I_b,int, Bicycle LOS Score for Intersection	2.061	1.845	2.319	2.395
Bicycle LOS	B	A	B	B

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 126: 35th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

**Intersection Setup**

Name	35th St			35th St			US 20			US 20		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	110.00	100.00	100.00	360.00	100.00	125.00	490.00	100.00	140.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			US 20			US 20		
Base Volume Input [veh/h]	34	119	104	37	116	9	19	632	19	149	633	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	3.00	2.00	0.00	5.00	0.00	0.00	7.00	5.00	7.00	15.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	119	104	37	116	9	19	632	19	149	633	111
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	35	30	11	34	3	6	184	6	43	184	32
Total Analysis Volume [veh/h]	40	138	121	43	135	10	22	735	22	173	736	129
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	4			4			4			4		
v_di, Inbound Pedestrian Volume crossing in	4			4			4			4		
v_co, Outbound Pedestrian Volume crossing	1			1			0			1		
v_ci, Inbound Pedestrian Volume crossing mi	0			1			1			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	12			2			0			0		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	6	4	6	6	4	10	10	4	10	10
Maximum Green [s]	12	22	22	12	22	22	12	58	58	17	63	63
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	17	27	27	17	27	27	17	64	64	22	69	69
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	0	10	10	0	9	9	0	8	8	0	7	7
Pedestrian Clearance [s]	0	19	19	0	20	20	0	11	11	0	10	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	6.00	6.00	4.50	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.50	0.00	2.50	2.50	4.00	4.00	2.50	4.00	4.00
g_i, Effective Green Time [s]	31	23	31	23	2	69	69	15	82	82
g / C, Green / Cycle	0.24	0.18	0.24	0.18	0.02	0.53	0.53	0.11	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.03	0.08	0.01	0.41	0.01	0.10	0.44	0.08
s, saturation flow rate [veh/h]	1301	1654	1268	1796	1810	1795	1550	1709	1675	1561
c, Capacity [veh/h]	308	296	215	323	32	950	820	196	1049	978
d1, Uniform Delay [s]	38.72	51.98	39.96	47.55	63.14	14.10	9.10	54.17	5.87	4.16
k, delay calibration	0.08	0.16	0.08	0.08	0.08	0.50	0.50	0.21	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	11.72	0.34	0.73	18.48	6.12	0.06	20.80	3.92	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.88	0.20	0.45	0.70	0.77	0.03	0.88	0.70	0.13
d, Delay for Lane Group [s/veh]	38.86	63.70	40.30	48.28	81.62	20.22	9.16	74.97	9.78	4.44
Lane Group LOS	D	E	D	D	F	C	A	E	A	A
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.03	9.25	1.11	4.32	0.87	11.12	0.20	6.34	5.11	0.66
50th-Percentile Queue Length [ft/ln]	25.66	231.31	27.77	107.91	21.72	278.06	5.00	158.46	127.86	16.47
95th-Percentile Queue Length [veh/ln]	1.85	14.24	2.00	7.72	1.56	16.59	0.36	10.47	8.82	1.19
95th-Percentile Queue Length [ft/ln]	46.18	356.02	49.99	193.10	39.10	414.79	9.01	261.68	220.59	29.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.86	63.70	63.70	40.30	48.28	48.28	81.62	20.22	9.16	74.97	9.78	4.44
Movement LOS	D	E	E	D	D	D	F	C	A	E	A	A
d_A, Approach Delay [s/veh]	60.37			46.45			21.64			19.98		
Approach LOS	E			D			C			B		
d_I, Intersection Delay [s/veh]	27.95											
Intersection LOS	C											
Intersection V/C	0.783											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	12.0	11.0	13.0	14.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	54.46	52.65	51.75
I_p,int, Pedestrian LOS Score for Intersection	2.127	2.087	2.731	2.867
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	346	346	892	969
d_b, Bicycle Delay [s]	44.71	44.49	19.94	17.26
I_b,int, Bicycle LOS Score for Intersection	2.053	1.870	2.845	3.272
Bicycle LOS	B	A	C	C

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 127: 26th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

**Intersection Setup**

Name	26th St			26th St			US 20			US 20		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	400.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		



**Volumes**

Name	26th St			26th St			US 20			US 20		
Base Volume Input [veh/h]	2	39	77	17	12	3	7	760	4	36	894	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	50.00	3.00	1.00	0.00	17.00	0.00	14.00	7.00	0.00	6.00	10.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	39	77	17	12	3	7	760	4	36	894	94
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	11	21	5	3	1	2	209	1	10	246	26
Total Analysis Volume [veh/h]	2	43	85	19	13	3	8	835	4	40	982	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			7			8			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			8			7			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			0			0			7		

Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	46.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	8	8	8	8	8	8	4	10	10	4	10	10
Maximum Green [s]	30	30	30	30	30	30	15	74	74	10	69	69
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	35	35	35	35	35	35	20	80	80	15	75	75
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	0	0	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	0	0	17	17	17	0	6	6	0	11	11
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	6.00	6.00	4.50	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	2.50	4.00	4.00	2.50	4.00	4.00
g_i, Effective Green Time [s]	12	12	1	98	98	4	101	101
g / C, Green / Cycle	0.10	0.10	0.01	0.76	0.76	0.03	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.08	0.04	0.00	0.47	0.00	0.02	0.56	0.07
s, saturation flow rate [veh/h]	1627	972	1609	1795	1615	1724	1750	1552
c, Capacity [veh/h]	183	135	14	1357	1221	51	1360	1206
d1, Uniform Delay [s]	57.83	54.54	64.02	0.00	0.00	62.00	0.00	0.00
k, delay calibration	0.08	0.08	0.08	0.50	0.50	0.08	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	0.74	25.55	2.10	0.00	17.07	3.35	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.71	0.26	0.58	0.62	0.00	0.78	0.72	0.09
d, Delay for Lane Group [s/veh]	61.59	55.29	89.57	2.10	0.00	79.07	3.35	0.14
Lane Group LOS	E	E	F	A	A	E	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.43	1.11	0.36	0.79	0.00	1.52	1.27	0.05
50th-Percentile Queue Length [ft/ln]	110.80	27.72	8.91	19.77	0.04	37.97	31.65	1.17
95th-Percentile Queue Length [veh/ln]	7.88	2.00	0.64	1.42	0.00	2.73	2.28	0.08
95th-Percentile Queue Length [ft/ln]	197.12	49.89	16.04	35.58	0.07	68.34	56.97	2.10

**Movement, Approach, & Intersection Results**

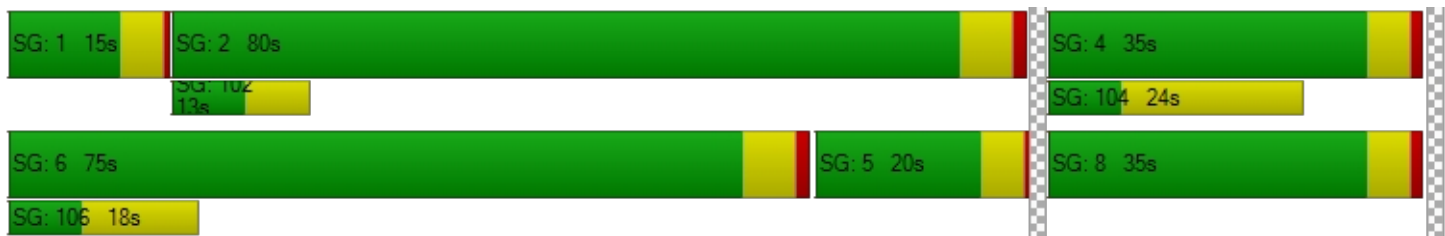
d_M, Delay for Movement [s/veh]	61.59	61.59	61.59	55.29	55.29	55.29	89.57	2.10	0.00	79.07	3.35	0.14
Movement LOS	E	E	E	E	E	E	F	A	A	E	A	A
d_A, Approach Delay [s/veh]	61.59			55.29			2.91			5.75		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	8.83											
Intersection LOS	A											
Intersection V/C	0.757											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	30.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	54.46	54.46	54.46	38.46
I_p,int, Pedestrian LOS Score for Intersection	1.808	1.809	2.822	2.916
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	462	462	1138	1062
d_b, Bicycle Delay [s]	38.52	38.46	12.06	14.36
I_b,int, Bicycle LOS Score for Intersection	1.774	1.617	2.957	3.416
Bicycle LOS	A	A	C	C

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 128: 15th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.782

**Intersection Setup**

Name	15th St			15th St			US 20			US 20		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	400.00	100.00	200.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St			15th St			US 20			US 20		
Base Volume Input [veh/h]	72	32	3	49	20	37	52	715	87	5	921	159
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	9.00	0.00	10.00	5.00	0.00	2.00	6.00	1.00	0.00	10.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	32	3	49	20	37	52	715	87	5	921	159
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	9	1	13	5	10	14	194	24	1	250	43
Total Analysis Volume [veh/h]	78	35	3	53	22	40	57	777	95	5	1001	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			2			0			1		
v_di, Inbound Pedestrian Volume crossing in	0			1			0			2		
v_co, Outbound Pedestrian Volume crossing	3			4			4			3		
v_ci, Inbound Pedestrian Volume crossing mi	3			4			4			3		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	17			5			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	46.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	8	8	8	8	8	8	4	10	10	4	10	10
Maximum Green [s]	30	30	30	30	30	30	15	69	69	15	69	69
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	35	35	35	35	35	35	20	75	75	20	75	75
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	8	8	8	7	7	7	0	7	7	0	11	11
Pedestrian Clearance [s]	20	20	20	16	16	16	0	11	11	0	9	9
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	6.00	6.00	4.50	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	4.00	4.00	2.50	4.00	4.00
g_i, Effective Green Time [s]	16	16	5	99	99	1	94	94
g / C, Green / Cycle	0.12	0.12	0.04	0.76	0.76	0.01	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.03	0.43	0.06	0.00	0.57	0.11
s, saturation flow rate [veh/h]	1234	1521	1781	1810	1569	1810	1750	1573
c, Capacity [veh/h]	194	222	74	1375	1192	10	1266	1139
d1, Uniform Delay [s]	55.63	54.34	60.82	0.00	0.00	64.38	0.83	0.64
k, delay calibration	0.08	0.08	0.08	0.50	0.50	0.08	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.19	1.38	12.00	1.69	0.13	28.93	5.09	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.60	0.52	0.77	0.57	0.08	0.52	0.79	0.15
d, Delay for Lane Group [s/veh]	57.82	55.71	72.81	1.69	0.13	93.30	5.92	0.93
Lane Group LOS	E	E	E	A	A	F	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.86	3.70	2.05	0.64	0.04	0.24	2.69	0.24
50th-Percentile Queue Length [ft/ln]	96.55	92.56	51.17	16.11	1.08	5.97	67.19	5.88
95th-Percentile Queue Length [veh/ln]	6.95	6.66	3.68	1.16	0.08	0.43	4.84	0.42
95th-Percentile Queue Length [ft/ln]	173.78	166.61	92.11	28.99	1.95	10.75	120.93	10.58



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.82	57.82	57.82	55.71	55.71	55.71	72.81	1.69	0.13	93.30	5.92	0.93
Movement LOS	E	E	E	E	E	E	E	A	A	F	A	A
d_A, Approach Delay [s/veh]	57.82			55.71			5.89			5.56		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	10.75											
Intersection LOS	B											
Intersection V/C	0.782											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	15.0	11.0	12.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	54.46	50.86	54.46	53.55
I_p,int, Pedestrian LOS Score for Intersection	1.829	1.884	3.008	2.959
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	469	469	1062	1062
d_b, Bicycle Delay [s]	38.40	38.17	14.32	14.31
I_b,int, Bicycle LOS Score for Intersection	1.751	1.749	3.092	3.505
Bicycle LOS	A	A	C	D

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Approach v/c Ratio Calculations - Weekday AM Peak Hour

Note: Vistro reports v/c ratios by movement, but not for approaches. Where there is a shared lane approach, the v/c ratio is reported as the weighted average of the individual movements. Calculations for the approach v/c ratios are provided below.

#### Intersection 103 - NB

Volume	3	7	66	
v/c ratio	0.04	0.08	0.13	
Weight	0.12	0.56	8.58	9.26
<b>Approach v/c</b>				<b>0.12</b>

#### Intersection 105 - EB

Volume	11	18	8	
v/c ratio	0.04	0.06	0.02	
Weight	0.44	1.08	0.16	1.68
<b>Approach v/c</b>				<b>0.05</b>

#### Intersection 107 - SB

Volume	9	9	15	
v/c ratio	0.05	0.05	0.03	
Weight	0.45	0.45	0.45	1.35
<b>Approach v/c</b>				<b>0.04</b>

#### Intersection 110 - WB

Volume	5	1	5	
v/c ratio	0.02	0	0.01	
Weight	0.1	0	0.05	0.15
<b>Approach v/c</b>				<b>0.01</b>

#### Intersection 111 - WB

Volume	21	8	11	
v/c ratio	0.1	0.03	0.02	
Weight	2.1	0.24	0.22	2.56
<b>Approach v/c</b>				<b>0.06</b>

#### Intersection 113 - SB

Volume	4	70	6	
v/c ratio	0.01	0.19	0.01	
Weight	0.04	13.3	0.06	13.4
<b>Approach v/c</b>				<b>0.17</b>

#### Intersection 118 - NB

Volume	4	0	11	
v/c ratio	0.01		0.02	
Weight	0.04	0	0.22	0.26
<b>Approach v/c</b>				<b>0.02</b>

#### Intersection 120 - WB

Volume	39	0	11	
v/c ratio	0.16	0	0.02	
Weight	6.24	0	0.22	6.46
<b>Approach v/c</b>				<b>0.13</b>

24247.001 OSU TOS

Vistro File: H:\...\TOS\_2021-2022\_updated.vistro  
Report File: H:\...\Operations\_PM.pdf

Scenario 2 Ex PM  
1/30/2022

**Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
101	36th St & Harrison Blvd	Signalized	HCM 6th Edition	EB Left	0.509	11.7	B
102	35th St & Harrison Blvd	Signalized	HCM 6th Edition	NB Right	0.269	15.1	B
103	30th St & Harrison Blvd	Two-way stop	HCM 6th Edition	SB Left	0.033	46.6	E
104	29th St & Harrison Blvd	Signalized	HCM 6th Edition	WB Thru	0.724	14.8	B
105	30th St & Orchard Ave	Two-way stop	HCM 6th Edition	EB Thru	0.067	15.9	C
106	26th St & Monroe Ave	All-way stop	HCM 6th Edition	WB Thru	0.265	8.5	A
107	25th St & Monroe Ave	Two-way stop	HCM 6th Edition	NB Left	0.058	24.4	C
108	Kings Blvd & Monroe Ave	All-way stop	HCM 6th Edition	EB Thru	0.513	12.0	B
109	14th St & Monroe Ave	Signalized	HCM 6th Edition	WB Left	0.426	17.8	B
110	35th St & Campus Way	Two-way stop	HCM 6th Edition	WB Left	0.170	20.3	C
111	35th St & Jefferson Way	Two-way stop	HCM 6th Edition	WB Left	0.176	22.0	C
112	14th St & Jefferson Way	Signalized	HCM 6th Edition	SWB Left	0.433	9.5	A
113	11th St & Jefferson Ave	Two-way stop	HCM 6th Edition	NB Left	0.026	16.3	C
114	9th St & Jefferson Ave	Signalized	HCM 6th Edition	WB Right	0.631	5.7	A
115	9th St & Monroe Ave	Signalized	HCM 6th Edition	EB Left	0.365	17.8	B
116	30th St & Washington Way	All-way stop	HCM 6th Edition	SB Thru	0.326	9.4	A
117	26th St & Washington Way	All-way stop	HCM 6th Edition	WB Thru	0.259	9.0	A
			HCM 6th				

118	17th St & Washington Way	Two-way stop	HCM 6th Edition	NB Right	0.079	12.0	B
119	15th St & Washington Way	Signalized	HCM 6th Edition	NB Left	0.332	16.3	B
120	15th St & Washington Ave	Two-way stop	HCM 6th Edition	WB Left	0.455	38.4	E
121	35th St & Western Blvd	Signalized	HCM 6th Edition	SB Left	0.770	15.7	B
122	30th St & Western Blvd	Two-way stop	HCM 6th Edition	SB Left	0.547	34.8	D
123	26th St & Western Blvd	Signalized	HCM 6th Edition	NB Left	0.693	15.3	B
125	15th St & Western Blvd	Signalized	HCM 6th Edition	WB Left	0.762	17.8	B
126	35th St & US 20	Signalized	HCM 6th Edition	EB Left	0.834	31.5	C
127	26th St & US 20	Signalized	HCM 6th Edition	NEB Left	0.884	14.4	B
128	15th St & US 20	Signalized	HCM 6th Edition	WB Left	0.848	16.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

**Intersection Level Of Service Report**  
**Intersection 101: 36th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

**Intersection Setup**

Name	36th St		Harrison Blvd		Harrison Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	36th St		Harrison Blvd		Harrison Blvd	
Base Volume Input [veh/h]	81	62	22	239	169	142
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	1.00	5.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	62	22	239	169	142
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	19	7	74	52	44
Total Analysis Volume [veh/h]	100	77	27	295	209	175
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1		1		0	
v_di, Inbound Pedestrian Volume crossing in	1		1		0	
v_co, Outbound Pedestrian Volume crossing	2		0		1	
v_ci, Inbound Pedestrian Volume crossing mi	1		0		2	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		4		7	

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	178
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	34.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

**Phasing & Timing**

Control Type	Permissive	Overlap	ProtPerm	Overlap	Permissive	Permissive
Signal Group	4	4	5	2	6	6
Auxiliary Signal Groups		2,4		2,4		
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	5	3	5	5	5
Maximum Green [s]	40	40	15	65	65	65
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5
Walk [s]	5	5	0	5	5	5
Pedestrian Clearance [s]	13	13	0	13	13	13
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall	No	No	No	Yes	Yes	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	6.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	L	C	C
C, Cycle Length [s]	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	0.00	2.50	0.00	2.50
g_i, Effective Green Time [s]	11	28	1	28	12
g / C, Green / Cycle	0.27	0.68	0.02	0.68	0.28
(v / s)_i Volume / Saturation Flow Rate	0.09	0.05	0.01	0.16	0.23
s, saturation flow rate [veh/h]	1084	1613	1810	1885	1660
c, Capacity [veh/h]	341	1090	35	1274	465
d1, Uniform Delay [s]	16.39	2.30	20.34	2.59	14.04
k, delay calibration	0.08	0.08	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.02	23.27	0.07	2.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.07	0.78	0.23	0.83
d, Delay for Lane Group [s/veh]	16.74	2.32	43.61	2.66	16.87
Lane Group LOS	B	A	D	A	B
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.82	0.09	0.46	0.41	3.20
50th-Percentile Queue Length [ft/ln]	20.49	2.36	11.60	10.15	80.12
95th-Percentile Queue Length [veh/ln]	1.48	0.17	0.84	0.73	5.77
95th-Percentile Queue Length [ft/ln]	36.88	4.25	20.88	18.28	144.22



**Movement, Approach, & Intersection Results**

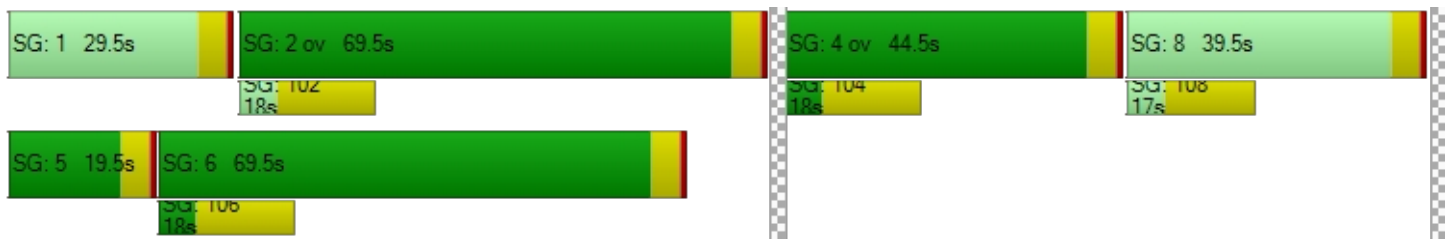
d_M, Delay for Movement [s/veh]	16.74	2.32	43.61	2.66	16.87	16.87
Movement LOS	B	A	D	A	B	B
d_A, Approach Delay [s/veh]	10.47		6.10		16.87	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	11.66					
Intersection LOS	B					
Intersection V/C	0.509					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	12.85	12.85	12.85
I_p,int, Pedestrian LOS Score for Intersection	2.003	2.065	2.133
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1916	5244	3113
d_b, Bicycle Delay [s]	0.04	55.05	6.49
I_b,int, Bicycle LOS Score for Intersection	1.560	2.091	2.193
Bicycle LOS	A	B	B

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 102: 35th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.269

**Intersection Setup**

Name	35th St			NW 35th St			Harrison Blvd			Harrison Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	250.00	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			0.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			NW 35th St			Harrison Blvd			Harrison Blvd		
Base Volume Input [veh/h]	137	9	175	0	0	0	0	199	121	137	174	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00	1.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	9	175	0	0	0	0	199	121	137	174	4
Peak Hour Factor	0.9100	0.9100	0.9100	0.8800	0.8800	0.8800	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	2	48	0	0	0	0	55	33	38	48	1
Total Analysis Volume [veh/h]	151	10	192	0	0	0	0	219	133	151	191	4
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			2			0			1		
v_di, Inbound Pedestrian Volume crossing in	0			1			1			2		
v_co, Outbound Pedestrian Volume crossing	2			2			2			2		
v_ci, Inbound Pedestrian Volume crossing mi	2			2			2			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	14			0			0			1		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	178
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	34.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	9.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	8	8	8	0	0	0	2	2	2	1	6	6	
Auxiliary Signal Groups													
Lead / Lag	Lag	-	-	-	-	-	Lag	-	-	Lead	-	-	
Minimum Green [s]	5	5	5	0	0	0	5	5	5	3	5	5	
Maximum Green [s]	35	35	35	0	0	0	65	65	65	25	65	65	
Amber [s]	4.0	4.0	4.0	0.0	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	
All red [s]	0.5	0.5	0.5	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	
Split [s]	30	30	30	0	0	0	30	30	30	30	30	30	
Vehicle Extension [s]	2.5	2.5	2.5	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	
Walk [s]	5	5	5	0	0	0	5	5	5	0	5	5	
Pedestrian Clearance [s]	12	12	12	0	0	0	13	13	13	0	13	13	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Rest In Walk		No						No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	
I2, Clearance Lost Time [s]	2.5	2.5	2.5	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5	
Minimum Recall		No						Yes		No	Yes		
Maximum Recall		No						No		No	No		
Pedestrian Recall		No						No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R		C	L	C
C, Cycle Length [s]	65	65		65	65	65
L, Total Lost Time per Cycle [s]	4.50	4.50		4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50		2.50	0.00	2.50
g_i, Effective Green Time [s]	10	10		33	41	37
g / C, Green / Cycle	0.16	0.16		0.50	0.63	0.56
(v / s)_i Volume / Saturation Flow Rate	0.09	0.13		0.20	0.13	0.10
s, saturation flow rate [veh/h]	1815	1511		1738	1151	1862
c, Capacity [veh/h]	290	242		922	757	1049
d1, Uniform Delay [s]	25.25	26.12		10.29	4.81	6.95
k, delay calibration	0.08	0.08		0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	4.40		0.19	0.09	0.06
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.55	0.79		0.38	0.20	0.19
d, Delay for Lane Group [s/veh]	26.48	30.52		10.48	4.91	7.01
Lane Group LOS	C	C		B	A	A
Critical Lane Group	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.31	3.03		2.87	0.68	1.16
50th-Percentile Queue Length [ft/ln]	57.86	75.69		71.72	16.88	28.92
95th-Percentile Queue Length [veh/ln]	4.17	5.45		5.16	1.22	2.08
95th-Percentile Queue Length [ft/ln]	104.15	136.24		129.09	30.39	52.05

**Movement, Approach, & Intersection Results**

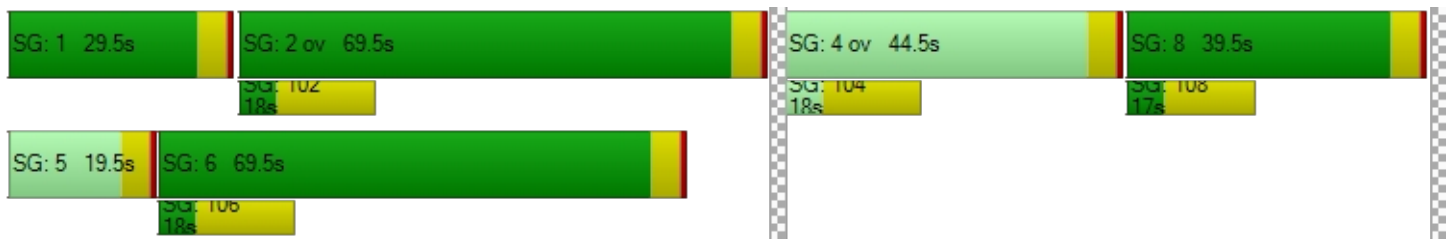
d_M, Delay for Movement [s/veh]	26.48	26.48	30.52	0.00	0.00	0.00	10.48	10.48	10.48	4.91	7.01	7.01
Movement LOS	C	C	C				B	B	B	A	A	A
d_A, Approach Delay [s/veh]	28.68			0.00			10.48			6.09		
Approach LOS	C			A			B			A		
d_I, Intersection Delay [s/veh]	15.15											
Intersection LOS	B											
Intersection V/C	0.269											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.16	24.16	24.16	24.16
I_p,int, Pedestrian LOS Score for Intersection	2.212	1.408	1.982	2.130
Crosswalk LOS	B	A	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1076	0	1998	1998
d_b, Bicycle Delay [s]	7.00	32.53	0.00	0.00
I_b,int, Bicycle LOS Score for Intersection	2.142	4.132	2.140	2.131
Bicycle LOS	B	D	B	B

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 103: 30th St & Harrison Blvd**

Control Type:	Two-way stop	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

**Intersection Setup**

Name	30th St			30th St			Harrison Blvd			Harrison Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Harrison Blvd			Harrison Blvd		
Base Volume Input [veh/h]	7	20	201	3	7	6	4	348	9	111	376	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	17.00	0.00	1.00	0.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	20	201	3	7	6	4	348	9	111	376	10
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	5	55	1	2	2	1	96	2	30	103	3
Total Analysis Volume [veh/h]	8	22	221	3	8	7	4	382	10	122	413	11
Pedestrian Volume [ped/h]	2			8			10			8		

**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.05	0.11	0.34	0.03	0.04	0.01	0.00	0.00	0.00	0.10	0.00	0.00
d_M, Delay for Movement [s/veh]	32.78	30.24	17.42	46.63	24.96	12.83	8.20	0.00	0.00	8.42	0.00	0.00
Movement LOS	D	D	C	E	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.74	2.74	2.74	0.28	0.28	0.28	0.01	0.01	0.01	0.35	0.00	0.00
95th-Percentile Queue Length [ft/ln]	68.53	68.53	68.53	6.99	6.99	6.99	0.27	0.27	0.27	8.68	0.00	0.00
d_A, Approach Delay [s/veh]	19.03			23.86			0.08			1.88		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.18											
Intersection LOS	E											



**Intersection Level Of Service Report**  
**Intersection 104: 29th St & Harrison Blvd**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.724

**Intersection Setup**

Name	29th St			Harrison Blvd			Harrison Blvd			29th St		
Approach	Southbound			Eastbound			Westbound			Northwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	29th St			Harrison Blvd			Harrison Blvd			29th St		
Base Volume Input [veh/h]	48	82	106	134	363	53	0	318	32	71	106	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	1.00	0.00	1.00	4.00	0.00	2.00	0.00	3.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	82	106	134	363	53	0	318	32	71	106	23
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9000	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	22	28	36	98	14	0	85	9	19	28	6
Total Analysis Volume [veh/h]	52	88	114	144	390	57	0	342	34	76	114	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	22			23			11			11		
v_di, Inbound Pedestrian Volume crossing in	23			22			11			11		
v_co, Outbound Pedestrian Volume crossing	2			2			1			2		
v_ci, Inbound Pedestrian Volume crossing mi	1			2			2			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	12			10			1			78		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	93
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	19.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	18.00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	8	1	6	6	2	2	2	7	4	4	
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-	
Minimum Green [s]	3	5	5	3	5	5	5	5	5	3	5	5	
Maximum Green [s]	15	20	20	15	25	25	25	25	25	15	20	20	
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Split [s]	30	30	30	30	30	30	30	30	30	30	0	0	
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0
Walk [s]	0	5	5	0	5	5	5	5	5	0	5	5	
Pedestrian Clearance [s]	0	16	16	0	20	20	15	15	15	0	12	12	
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Rest In Walk		No			No			No			No		
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Minimum Recall	No	No		No	No			No		No	No		
Maximum Recall	No	No		No	No			No		No	No		
Pedestrian Recall	No	No		No	No			No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	0.0	0.0	0.0	6.0	6.0	6.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	L	C
C, Cycle Length [s]	50	50	50	50	50	50	50
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.50	0.00	2.50	2.50	0.00	2.50
g_i, Effective Green Time [s]	18	12	22	22	13	18	12
g / C, Green / Cycle	0.37	0.23	0.45	0.45	0.27	0.37	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.14	0.13	0.27	0.23	0.06	0.09
s, saturation flow rate [veh/h]	1250	1467	1136	1651	1652	1196	1576
c, Capacity [veh/h]	596	343	519	736	446	527	394
d1, Uniform Delay [s]	10.22	16.91	9.72	10.46	17.14	10.65	15.32
k, delay calibration	0.08	0.08	0.08	0.08	0.08	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	1.20	0.21	0.60	3.33	0.12	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.59	0.28	0.61	0.84	0.14	0.35
d, Delay for Lane Group [s/veh]	10.27	18.11	9.94	11.06	20.46	10.78	15.85
Lane Group LOS	B	B	A	B	C	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.33	1.96	0.82	3.17	4.01	0.49	1.23
50th-Percentile Queue Length [ft/ln]	8.21	49.02	20.39	79.21	100.22	12.37	30.66
95th-Percentile Queue Length [veh/ln]	0.59	3.53	1.47	5.70	7.22	0.89	2.21
95th-Percentile Queue Length [ft/ln]	14.77	88.24	36.69	142.57	180.39	22.26	55.19

**Movement, Approach, & Intersection Results**

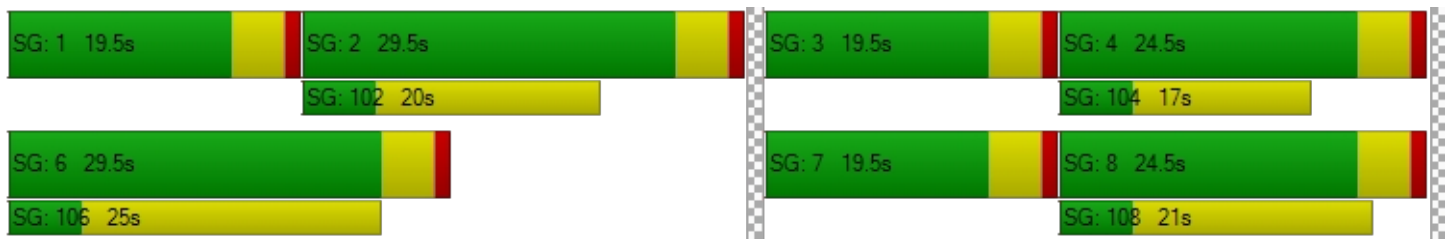
d_M, Delay for Movement [s/veh]	10.27	18.11	18.11	9.94	11.06	11.06	0.00	20.46	20.46	10.78	15.85	15.85
Movement LOS	B	B	B	A	B	B		C	C	B	B	B
d_A, Approach Delay [s/veh]	16.50			10.79				20.46		14.06		
Approach LOS	B			B				C		B		
d_I, Intersection Delay [s/veh]	14.82											
Intersection LOS	B											
Intersection V/C	0.724											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	16.57			16.57			16.57			16.57		
I_p,int, Pedestrian LOS Score for Intersection	2.121			2.359			2.049			2.008		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	808			1010			1010			808		
d_b, Bicycle Delay [s]	8.85			6.10			6.07			9.15		
I_b,int, Bicycle LOS Score for Intersection	1.979			2.535			2.180			1.914		
Bicycle LOS	A			B			B			A		

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 105: 30th St & Orchard Ave**

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

**Intersection Setup**

Name	30th St			30th St			Orchard Ave			Orchard Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕					
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Orchard Ave			Orchard Ave		
Base Volume Input [veh/h]	7	241	25	9	175	16	15	22	15	9	4	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	241	25	9	175	16	15	22	15	9	4	4
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	68	7	3	49	4	4	6	4	3	1	1
Total Analysis Volume [veh/h]	8	271	28	10	197	18	17	25	17	10	4	4
Pedestrian Volume [ped/h]	43			21			38			37		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.04	0.07	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.84	0.00	0.00	8.04	0.00	0.00	15.40	15.89	11.42	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A	C	C	B			
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.46	0.46	0.46	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.47	0.63	0.63	0.63	11.52	11.52	11.52	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.20			0.36			14.46			0.00		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	1.69											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 106: 26th St & Monroe Ave**

Control Type:	All-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.265

**Intersection Setup**

Name	26th St			26th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Westbound			Southeastbound		
Lane Configuration	↗			↖			↖			↗		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	25	15	93	5	0	11	4	198	16	6	173	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	10.00	0.00	0.00	9.00	0.00	2.00	0.00	0.00	2.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	15	93	5	0	11	4	198	16	6	173	32
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.8000	0.9200	0.8000	0.9200	0.9200	0.9200	0.9200	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	4	25	1	0	3	1	54	4	2	47	10
Total Analysis Volume [veh/h]	27	16	101	5	0	12	5	215	17	7	188	41
Pedestrian Volume [ped/h]	37			51			132			167		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	787	791	874	857
Degree of Utilization, x	0.18	0.02	0.27	0.23

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.67	0.07	1.07	0.88
95th-Percentile Queue Length [ft]	16.65	1.65	26.75	21.88
Approach Delay [s/veh]	8.59	7.65	8.60	8.44
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.52			
Intersection LOS	A			

**Intersection Level Of Service Report  
Intersection 107: 25th St & Monroe Ave**

Control Type:	Two-way stop	Delay (sec / veh):	24.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

**Intersection Setup**

Name	25th St/Park Terrace Pl			25th St/Park Terrace Pl			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			20.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	25th St/Park Terrace Pl			25th St/Park Terrace Pl			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	11	9	48	34	6	30	26	215	14	28	178	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	9	48	34	6	30	26	215	14	28	178	35
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	2	13	9	2	8	7	57	4	7	47	9
Total Analysis Volume [veh/h]	12	9	51	36	6	32	27	226	15	29	187	37
Pedestrian Volume [ped/h]	104			105			131			24		

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**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0




**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.06	0.04	0.08	0.14	0.02	0.07	0.02	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	24.37	21.23	12.89	21.94	22.32	15.71	8.28	0.00	0.00	8.33	0.00	0.00
Movement LOS	C	C	B	C	C	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.64	0.64	0.64	0.86	0.86	0.86	0.07	0.07	0.07	0.08	0.08	0.08
95th-Percentile Queue Length [ft/ln]	16.03	16.03	16.03	21.47	21.47	21.47	1.85	1.85	1.85	2.01	2.01	2.01
d_A, Approach Delay [s/veh]	15.84			19.28			0.83			0.96		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	4.55											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 108: Kings Blvd & Monroe Ave**

Control Type:	All-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

**Intersection Setup**

Name	Kings Blvd		Monroe Ave		Monroe Ave	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		20.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Kings Blvd		Monroe Ave		Monroe Ave	
Base Volume Input [veh/h]	94	55	46	285	222	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	0.00	0.00	4.00	2.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	55	46	285	222	80
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	16	13	81	63	23
Total Analysis Volume [veh/h]	107	63	52	324	252	91
Pedestrian Volume [ped/h]	74		62		79	

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	652	733	757
Degree of Utilization, x	0.26	0.51	0.45

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	1.04	2.96	2.38
95th-Percentile Queue Length [ft]	26.01	74.05	59.53
Approach Delay [s/veh]	10.46	12.96	11.65
Approach LOS	B	B	B
Intersection Delay [s/veh]	11.98		
Intersection LOS	B		

**Intersection Level Of Service Report**  
**Intersection 109: 14th St & Monroe Ave**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

**Intersection Setup**

Name	14th St			14th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			20.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	14th St			14th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	143	129	124	12	109	11	14	208	174	107	177	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	0.00	1.00	0.00	0.00	4.00	3.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	129	124	12	109	11	14	208	174	107	177	10
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	34	33	3	29	3	4	55	46	28	47	3
Total Analysis Volume [veh/h]	151	136	131	13	115	12	15	219	183	113	186	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	25			33			24			33		
v_di, Inbound Pedestrian Volume crossing in	24			33			25			33		
v_co, Outbound Pedestrian Volume crossing	21			41			42			21		
v_ci, Inbound Pedestrian Volume crossing mi	21			42			41			21		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	33			6			39			16		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	93
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	4	4	2	8	8	8	2	2	2	6	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	3	3	3	3	3	3	3	3	3	3	3	3
Maximum Green [s]	40	40	45	40	40	40	45	45	45	45	45	45
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	44	44	49	44	44	44	49	49	49	49	49	49
Vehicle Extension [s]	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Walk [s]	5	5	5	5	5	5	5	5	5	5	5	5
Pedestrian Clearance [s]	9	9	9	9	9	9	9	9	9	9	9	9
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall		No	No		Yes			No			Yes	
Maximum Recall		Yes	Yes		No			Yes			No	
Pedestrian Recall		No	No		No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	6.0	6.0	6.0	20.0	20.0	20.0	20.0	20.0	20.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	C	R	C	L	C	L	C
C, Cycle Length [s]	93	93	93	93	93	93	93	93
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	45	40	45	45	45	45
g / C, Green / Cycle	0.43	0.43	0.48	0.43	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.12	0.07	0.08	0.08	0.01	0.25	0.11	0.11
s, saturation flow rate [veh/h]	1231	1900	1589	1787	1180	1616	998	1824
c, Capacity [veh/h]	524	817	769	811	550	782	383	883
d1, Uniform Delay [s]	18.59	16.27	13.50	16.35	16.91	16.49	25.26	13.89
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	0.44	0.48	0.04	0.09	2.41	0.16	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.17	0.17	0.17	0.03	0.51	0.30	0.22
d, Delay for Lane Group [s/veh]	19.97	16.71	13.98	16.39	17.01	18.90	25.42	13.93
Lane Group LOS	B	B	B	B	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.41	1.87	1.63	1.84	0.21	6.36	1.96	2.37
50th-Percentile Queue Length [ft/ln]	60.17	46.67	40.66	45.93	5.31	158.90	49.07	59.23
95th-Percentile Queue Length [veh/ln]	4.33	3.36	2.93	3.31	0.38	10.49	3.53	4.26
95th-Percentile Queue Length [ft/ln]	108.31	84.01	73.20	82.67	9.55	262.27	88.33	106.61

**Movement, Approach, & Intersection Results**

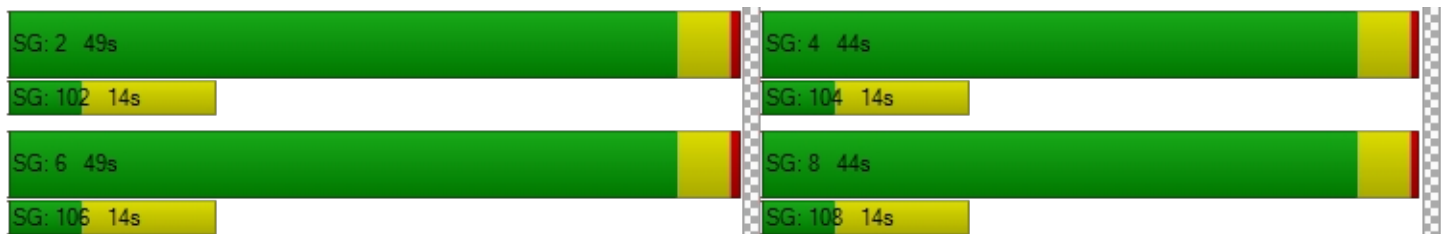
d_M, Delay for Movement [s/veh]	19.97	16.71	13.98	16.39	16.39	16.39	17.01	18.90	18.90	25.42	13.93	13.93
Movement LOS	B	B	B	B	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.03			16.39			18.83			18.12		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.81											
Intersection LOS	B											
Intersection V/C	0.426											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.94	37.94	37.94	37.94
I_p,int, Pedestrian LOS Score for Intersection	2.463	1.862	2.324	2.144
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	860	860	968	968
d_b, Bicycle Delay [s]	15.36	15.15	12.63	12.49
I_b,int, Bicycle LOS Score for Intersection	2.249	1.791	2.248	2.071
Bicycle LOS	B	A	B	B

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 110: 35th St & Campus Way**

Control Type:	Two-way stop	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.170

**Intersection Setup**

Name	35th St			35th St			Campus Way			Campus Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Campus Way			Campus Way		
Base Volume Input [veh/h]	2	293	23	10	324	2	6	2	3	41	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	1.00	13.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	293	23	10	324	2	6	2	3	41	0	30
Peak Hour Factor	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	88	7	3	98	1	2	1	1	12	0	9
Total Analysis Volume [veh/h]	2	353	28	12	390	2	7	2	4	49	0	36
Pedestrian Volume [ped/h]	12			34			1			9		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.01	0.01	0.17	0.00	0.06
d_M, Delay for Movement [s/veh]	8.07	0.00	0.00	8.11	0.00	0.00	19.37	17.13	11.05	20.33	19.30	13.65
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.03	0.03	0.03	0.12	0.12	0.12	0.87	0.87	0.87
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.13	0.78	0.78	0.78	3.10	3.10	3.10	21.65	21.65	21.65
d_A, Approach Delay [s/veh]	0.04			0.24			16.46			17.50		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	2.05											
Intersection LOS	C											

**Intersection Level Of Service Report  
Intersection 111: 35th St & Jefferson Way**

Control Type:	Two-way stop	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.176

**Intersection Setup**

Name	35th St			35th St			Jefferson Way			Jefferson Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			15.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Jefferson Way			Jefferson Way		
Base Volume Input [veh/h]	1	299	19	16	356	1	4	2	21	40	4	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	12.00	0.00	27.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	299	19	16	356	1	4	2	21	40	4	11
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	86	5	5	102	0	1	1	6	11	1	3
Total Analysis Volume [veh/h]	1	344	22	18	409	1	5	2	24	46	5	13
Pedestrian Volume [ped/h]	4			5			1			6		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.04	0.18	0.02	0.02
d_M, Delay for Movement [s/veh]	8.11	0.00	0.00	8.07	0.00	0.00	18.27	17.34	11.11	21.98	19.92	14.02
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.05	0.05	0.05	0.20	0.20	0.20	0.79	0.79	0.79
95th-Percentile Queue Length [ft/ln]	0.06	0.06	0.06	1.15	1.15	1.15	4.93	4.93	4.93	19.78	19.78	19.78
d_A, Approach Delay [s/veh]	0.02			0.34			12.66			20.20		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	2.07											
Intersection LOS	C											

**Intersection Level Of Service Report**  
**Intersection 112: 14th St & Jefferson Way**

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

**Intersection Setup**

Name	14th St			Jefferson Way			Jefferson Way			14th St		
Approach	Northbound			Eastbound			Westbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			15.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	14th St			Jefferson Way			Jefferson Way			14th St		
Base Volume Input [veh/h]	20	351	42	19	15	5	77	22	27	21	293	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	25.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	351	42	19	15	5	77	22	27	21	293	55
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	95	11	5	4	1	21	6	7	6	80	15
Total Analysis Volume [veh/h]	22	382	46	21	16	5	84	24	29	23	318	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	46			46			47			46		
v_di, Inbound Pedestrian Volume crossing in	47			46			46			46		
v_co, Outbound Pedestrian Volume crossing	219			218			58			59		
v_ci, Inbound Pedestrian Volume crossing mi	218			219			59			58		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	12			55			11			58		



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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	50
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	4	4	4	6	6	6	2	2	2	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	5	5	5	5	5	5	5	5	5	5
Maximum Green [s]	25	25	25	25	25	25	25	25	25	25	25	25
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Walk [s]	5	5	5	5	5	5	5	5	5	5	5	5
Pedestrian Clearance [s]	13	13	13	10	10	10	10	10	10	13	13	13
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		Yes			Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C
C, Cycle Length [s]	42	42	42	42	42	42	42	42	42
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
g_i, Effective Green Time [s]	18	18	15	15	15	15	15	18	18
g / C, Green / Cycle	0.43	0.43	0.36	0.36	0.36	0.36	0.36	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.02	0.02	0.12	0.01	0.02	0.02	0.22
s, saturation flow rate [veh/h]	780	1829	1201	1366	720	1900	1564	932	1754
c, Capacity [veh/h]	347	784	547	490	395	681	561	364	751
d1, Uniform Delay [s]	13.03	9.01	10.13	8.83	11.32	8.81	8.85	13.59	8.80
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.22	0.01	0.01	0.10	0.01	0.01	0.03	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.55	0.04	0.04	0.21	0.04	0.05	0.06	0.50
d, Delay for Lane Group [s/veh]	13.05	9.23	10.14	8.84	11.41	8.81	8.87	13.62	8.99
Lane Group LOS	B	A	B	A	B	A	A	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.15	2.30	0.13	0.11	0.57	0.13	0.16	0.16	1.98
50th-Percentile Queue Length [ft/ln]	3.69	57.50	3.16	2.87	14.18	3.26	3.97	3.97	49.56
95th-Percentile Queue Length [veh/ln]	0.27	4.14	0.23	0.21	1.02	0.23	0.29	0.29	3.57
95th-Percentile Queue Length [ft/ln]	6.65	103.50	5.68	5.17	25.52	5.87	7.15	7.14	89.21

**Movement, Approach, & Intersection Results**

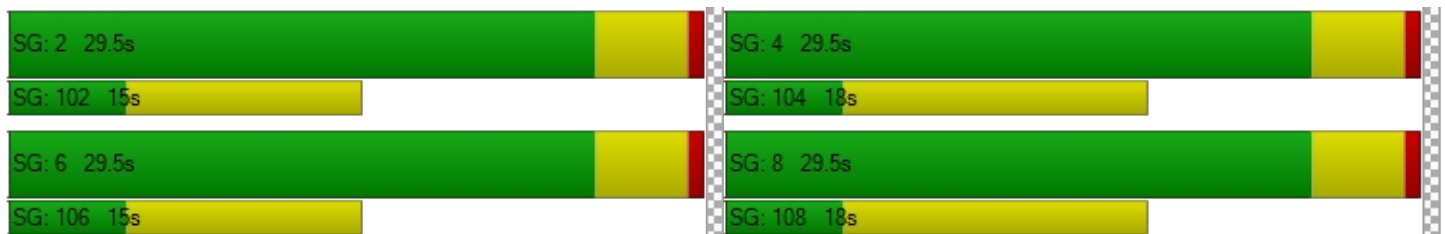
d_M, Delay for Movement [s/veh]	13.05	9.23	9.23	10.14	8.84	8.84	11.41	8.81	8.87	13.62	8.99	8.99
Movement LOS	B	A	A	B	A	A	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	9.42			9.49			10.42			9.26		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	9.49											
Intersection LOS	A											
Intersection V/C	0.433											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	13.03			13.03			13.03			13.03		
I_p,int, Pedestrian LOS Score for Intersection	2.252			1.956			2.151			2.156		
Crosswalk LOS	B			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1187			1187			1187			1187		
d_b, Bicycle Delay [s]	3.50			3.58			3.50			3.59		
I_b,int, Bicycle LOS Score for Intersection	2.302			1.629			1.786			2.221		
Bicycle LOS	B			A			A			B		

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 113: 11th St & Jefferson Ave**

Control Type:	Two-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

**Intersection Setup**

Name	11th St			11th Street			Jefferson Ave			Jefferson Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	11th St			11th Street			Jefferson Ave			Jefferson Ave		
Base Volume Input [veh/h]	9	69	54	15	71	26	6	72	4	46	84	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	6.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	69	54	15	71	26	6	72	4	46	84	8
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	20	16	4	20	7	2	21	1	13	24	2
Total Analysis Volume [veh/h]	10	79	62	17	82	30	7	83	5	53	97	9
Pedestrian Volume [ped/h]	46			29			47			17		

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**Intersection Settings**

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.16	0.07	0.04	0.17	0.04	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	16.35	14.51	11.40	16.04	14.58	11.69	7.54	0.00	0.00	7.67	0.00	0.00
Movement LOS	C	B	B	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.03	1.03	1.03	0.96	0.96	0.96	0.01	0.01	0.01	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	25.82	25.82	25.82	24.03	24.03	24.03	0.37	0.37	0.37	2.95	2.95	2.95
d_A, Approach Delay [s/veh]	13.35			14.10			0.56			2.56		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.04											
Intersection LOS	C											

**Intersection Level Of Service Report**  
**Intersection 114: 9th St & Jefferson Ave**

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

**Intersection Setup**

Name	9th St			9th St			Jefferson Ave			Jefferson Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+r			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			15.00			15.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	9th St			9th St			Jefferson Ave			Jefferson Ave		
Base Volume Input [veh/h]	2	82	2	97	103	84	76	67	3	0	49	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	12.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	82	2	97	103	84	76	67	3	0	49	53
Peak Hour Factor	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100	0.8100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	25	1	30	32	26	23	21	1	0	15	16
Total Analysis Volume [veh/h]	2	101	2	120	127	104	94	83	4	0	60	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	3			5			5			4		
v_di, Inbound Pedestrian Volume crossing in	4			5			5			3		
v_co, Outbound Pedestrian Volume crossing	12			9			11			9		
v_ci, Inbound Pedestrian Volume crossing mi	11			9			12			9		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			2			20			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	2	2	2	6	6	6	4	4	4	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	4	4	4	4	4	4	4	4	4	4	4	4
Maximum Green [s]	30	30	30	30	30	30	50	50	50	50	50	50
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	4.3	4.3	4.3	4.3	4.3	4.3
Walk [s]	5	5	5	5	5	5	5	5	5	5	5	5
Pedestrian Clearance [s]	11	11	11	11	11	11	13	13	13	13	13	13
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	C	C	R	C	C
C, Cycle Length [s]	16	16	16	16	16
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50
g_i, Effective Green Time [s]	4	4	4	3	3
g / C, Green / Cycle	0.24	0.24	0.24	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.13	0.07	0.10	0.19
s, saturation flow rate [veh/h]	940	1856	1545	1799	675
c, Capacity [veh/h]	454	779	375	704	359
d1, Uniform Delay [s]	5.07	5.38	4.99	5.72	5.62
k, delay calibration	0.08	0.08	0.08	0.17	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.17	0.29	0.30	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.32	0.28	0.26	0.35
d, Delay for Lane Group [s/veh]	5.27	5.56	5.29	6.02	6.53
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.11	0.25	0.11	0.33	0.28
50th-Percentile Queue Length [ft/ln]	2.68	6.25	2.85	8.36	6.95
95th-Percentile Queue Length [veh/ln]	0.19	0.45	0.20	0.60	0.50
95th-Percentile Queue Length [ft/ln]	4.83	11.25	5.12	15.05	12.51

**Movement, Approach, & Intersection Results**

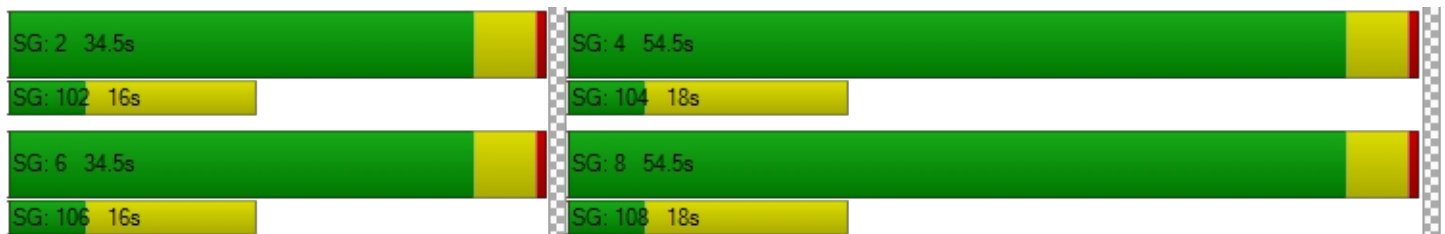
d_M, Delay for Movement [s/veh]	5.27	5.27	5.27	5.56	5.56	5.29	6.02	6.02	6.02	6.53	6.53	6.53
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.27			5.48			6.02			6.53		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.75											
Intersection LOS	A											
Intersection V/C	0.631											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	1.58			1.58			1.58			1.58		
I_p,int, Pedestrian LOS Score for Intersection	1.686			2.115			1.678			1.842		
Crosswalk LOS	A			B			A			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	3716			3716			6194			6194		
d_b, Bicycle Delay [s]	5.94			5.95			35.85			35.56		
I_b,int, Bicycle LOS Score for Intersection	1.733			2.139			1.858			1.766		
Bicycle LOS	A			B			A			A		

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 115: 9th St & Monroe Ave**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

**Intersection Setup**

Name	9th St			9th St			Monroe Ave			Monroe Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	9th St			9th St			Monroe Ave			Monroe Ave		
Base Volume Input [veh/h]	27	184	10	44	263	126	140	190	21	2	94	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	19.00	2.00	20.00	7.00	0.00	1.00	0.00	6.00	5.00	0.00	1.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	184	10	44	263	126	140	190	21	2	94	18
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	53	3	13	76	36	40	55	6	1	27	5
Total Analysis Volume [veh/h]	31	211	11	51	302	145	161	218	24	2	108	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	3			6			7			4		
v_di, Inbound Pedestrian Volume crossing in	4			7			6			3		
v_co, Outbound Pedestrian Volume crossing	23			17			22			17		
v_ci, Inbound Pedestrian Volume crossing mi	22			17			23			17		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			0			23			11		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	98
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	2	2	2	6	6	6	4	4	4	8	8	8
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	4	4	4	4	4	4	4	4	4	4	4	4
Maximum Green [s]	45	45	45	45	45	45	45	45	45	45	45	45
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	6	6	6	6	6	6	6	6	6	6	6	6
Pedestrian Clearance [s]	14	14	14	14	14	14	14	14	14	14	14	14
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			Yes			Yes	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	20.0	20.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	R	L	C	C	R
C, Cycle Length [s]	98	98	98	98	98	98	98	98
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	45	45	45	45	45	45
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.20	0.09	0.13	0.14	0.06	0.01
s, saturation flow rate [veh/h]	1302	1673	1784	1580	1288	1760	1881	1552
c, Capacity [veh/h]	644	768	861	725	595	808	901	713
d1, Uniform Delay [s]	15.69	15.61	17.60	15.76	19.80	16.62	15.22	14.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	0.51	1.44	0.62	1.12	0.95	0.28	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.18	0.41	0.20	0.27	0.30	0.12	0.03
d, Delay for Lane Group [s/veh]	16.30	16.11	19.05	16.38	20.92	17.57	15.50	14.60
Lane Group LOS	B	B	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.60	1.91	5.58	2.05	2.67	3.60	1.48	0.27
50th-Percentile Queue Length [ft/ln]	40.10	47.65	139.39	51.20	66.86	89.95	36.97	6.80
95th-Percentile Queue Length [veh/ln]	2.89	3.43	9.45	3.69	4.81	6.48	2.66	0.49
95th-Percentile Queue Length [ft/ln]	72.18	85.77	236.21	92.16	120.34	161.91	66.54	12.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.30	16.19	16.11	19.05	19.05	16.38	20.92	17.57	17.57	15.50	15.50	14.60
Movement LOS	B	B	B	B	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.20			18.27			18.91			15.35		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.76											
Intersection LOS	B											
Intersection V/C	0.365											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	39.51	39.51	39.51	39.51
I_p,int, Pedestrian LOS Score for Intersection	2.105	2.546	2.175	2.129
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	918	918	918	918
d_b, Bicycle Delay [s]	14.34	14.33	14.50	14.41
I_b,int, Bicycle LOS Score for Intersection	1.768	2.381	2.225	1.776
Bicycle LOS	A	B	B	A

**Sequence**

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 116: 30th St & Washington Way**

Control Type:	All-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.326

**Intersection Setup**

Name	30th St			30th St			Washington Way			Washington Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	30th St			30th St			Washington Way			Washington Way		
Base Volume Input [veh/h]	19	112	12	80	127	18	26	54	20	15	55	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	3.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	112	12	80	127	18	26	54	20	15	55	65
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	30	3	22	35	5	7	15	5	4	15	18
Total Analysis Volume [veh/h]	21	122	13	87	138	20	28	59	22	16	60	71
Pedestrian Volume [ped/h]	30			10			26			53		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	737	752	715	750
Degree of Utilization, x	0.21	0.33	0.15	0.20

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.80	1.42	0.54	0.72
95th-Percentile Queue Length [ft]	19.94	35.47	13.39	18.10
Approach Delay [s/veh]	9.20	10.09	8.94	8.96
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	9.43			
Intersection LOS	A			

**Intersection Level Of Service Report  
Intersection 117: 26th St & Washington Way**

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.259

**Intersection Setup**

Name	26th St			NW 26th St			Washington Way			Washington Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↻			↵↻			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	50.00	100.00	100.00	100.00	100.00	40.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			NW 26th St			Washington Way			Washington Way		
Base Volume Input [veh/h]	23	59	47	30	40	14	21	91	35	50	106	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	24.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	59	47	30	40	14	21	91	35	50	106	38
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	15	12	8	10	4	5	24	9	13	28	10
Total Analysis Volume [veh/h]	24	61	49	31	42	15	22	95	36	52	110	40
Pedestrian Volume [ped/h]	47			57			146			157		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	602	668	596	640	777	780
Degree of Utilization, x	0.04	0.16	0.05	0.09	0.20	0.26

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	0.12	0.59	0.16	0.29	0.73	1.03
95th-Percentile Queue Length [ft]	3.11	14.67	4.10	7.30	18.21	25.84
Approach Delay [s/veh]	9.11		8.94		8.76	9.22
Approach LOS	A		A		A	A
Intersection Delay [s/veh]	9.03					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 118: 17th St & Washington Way**

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.079

**Intersection Setup**

Name	17th St		Washington Way		Washington Way	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↗		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	17th St		Washington Way		Washington Way	
Base Volume Input [veh/h]	8	42	156	8	16	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	42	156	8	16	184
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	11	41	2	4	49
Total Analysis Volume [veh/h]	9	45	166	9	17	196
Pedestrian Volume [ped/h]	1		2		184	

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**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.08	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.68	11.95	0.00	0.00	7.58	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	7.74	7.74	0.00	0.00	0.91	0.91
d_A, Approach Delay [s/veh]	11.91		0.00		0.61	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.75					
Intersection LOS	B					

**Intersection Level Of Service Report  
Intersection 119: 15th St & Washington Way**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.332

**Intersection Setup**

Name	15th St		Washington Way	
Approach	Northbound		Southbound	
Lane Configuration	↵		↵	
Turning Movement	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00
Speed [mph]	30.00		25.00	
Grade [%]	0.00		0.00	
Curb Present	No		No	
Crosswalk	Yes		Yes	

**Volumes**

Name			15th St		Washington Way	
Base Volume Input [veh/h]	41	273	296	157	146	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	3.00	4.00	1.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	273	296	157	146	63
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	71	77	41	38	16
Total Analysis Volume [veh/h]	43	284	308	164	152	66
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1		46		1	
v_di, Inbound Pedestrian Volume crossing in	1		45		1	
v_co, Outbound Pedestrian Volume crossing	45		37		38	
v_ci, Inbound Pedestrian Volume crossing mi	46		38		37	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	7		35		12	

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	10.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	3	10	10	0	3	0
Maximum Green [s]	15	40	40	0	25	0
Amber [s]	4.0	4.0	4.0	0.0	4.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	2.5	0.0	2.5	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	14	11	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	Yes	Yes		Yes	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	20.0	6.0	0.0	20.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0



**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
g_i, Effective Green Time [s]	3	48	40	40	25	25
g / C, Green / Cycle	0.03	0.58	0.48	0.48	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.02	0.15	0.17	0.12	0.10	0.04
s, saturation flow rate [veh/h]	1810	1855	1840	1409	1514	1554
c, Capacity [veh/h]	57	1069	891	682	458	470
d1, Uniform Delay [s]	39.68	8.76	13.20	12.24	22.33	20.94
k, delay calibration	0.08	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.81	0.61	1.06	0.83	1.94	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.27	0.35	0.24	0.33	0.14
d, Delay for Lane Group [s/veh]	53.49	9.36	14.26	13.07	24.26	21.56
Lane Group LOS	D	A	B	B	C	C
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.07	2.47	3.65	1.83	2.50	1.00
50th-Percentile Queue Length [ft/ln]	26.76	61.84	91.30	45.79	62.46	24.96
95th-Percentile Queue Length [veh/ln]	1.93	4.45	6.57	3.30	4.50	1.80
95th-Percentile Queue Length [ft/ln]	48.17	111.31	164.33	82.41	112.43	44.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	53.49	9.36	14.26	13.07	24.26	21.56
Movement LOS	D	A	B	B	C	C
d_A, Approach Delay [s/veh]	15.17		13.85		23.45	
Approach LOS	B		B		C	
d_I, Intersection Delay [s/veh]	16.33					
Intersection LOS	B					
Intersection V/C	0.332					

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.76	32.76	32.76
I_p,int, Pedestrian LOS Score for Intersection	2.165	2.183	2.053
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	969	969	606
d_b, Bicycle Delay [s]	11.00	11.16	20.18
I_b,int, Bicycle LOS Score for Intersection	2.099	2.338	1.560
Bicycle LOS	B	B	A

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 120: 15th St & Washington Ave**

Control Type:	Two-way stop	Delay (sec / veh):	38.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

**Intersection Setup**

Name	15th St			15th St			Washington Ave			Washington Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St			15th St			Washington Ave			Washington Ave		
Base Volume Input [veh/h]	0	369	51	25	365	0	0	0	0	90	0	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	369	51	25	365	0	0	0	0	90	0	46
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	99	14	7	98	0	0	0	0	24	0	12
Total Analysis Volume [veh/h]	0	397	55	27	392	0	0	0	0	97	0	49
Pedestrian Volume [ped/h]	1			56			88			85		

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**Intersection Settings**

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.11
d_M, Delay for Movement [s/veh]	8.58	0.00	0.00	8.87	0.00	0.00	27.82	25.09	11.68	38.38	40.67	29.35
Movement LOS	A	A	A	A	A	A	D	D	B	E	E	D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.09	0.09	0.09	0.00	0.00	0.00	3.16	3.16	3.16
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	2.18	2.18	2.18	0.00	0.00	0.00	78.94	78.94	78.94
d_A, Approach Delay [s/veh]	0.00			0.57			21.53			35.35		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	5.31											
Intersection LOS	E											

**Intersection Level Of Service Report**  
**Intersection 121: 35th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

**Intersection Setup**

Name	35th St			35th St			Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			←↑			←↑			←↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	60.00	100.00	100.00	120.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			Western Blvd			Western Blvd		
Base Volume Input [veh/h]	24	117	36	79	195	147	91	241	19	63	379	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	6.00	1.00	0.00	2.00	3.00	0.00	2.00	1.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	117	36	79	195	147	91	241	19	63	379	77
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	33	10	22	55	42	26	68	5	18	108	22
Total Analysis Volume [veh/h]	27	133	41	90	222	167	103	274	22	72	431	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			1			2			3		
v_di, Inbound Pedestrian Volume crossing in	3			2			1			2		
v_co, Outbound Pedestrian Volume crossing	1			4			1			4		
v_ci, Inbound Pedestrian Volume crossing mi	1			4			1			4		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	3			11			4			6		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	114
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	24.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	15.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	5	5	5	5	3	10	10	3	10	10
Maximum Green [s]	40	40	40	40	40	40	20	40	40	20	40	40
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.6	4.6	2.5	4.6	4.6
Walk [s]	5	5	5	5	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	15	15	15	14	14	14	0	11	11	0	12	12
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	3.0	2.5	3.0	3.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	52	52	52	52	52	52	52
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	0.00	3.00	0.00	3.00
g_i, Effective Green Time [s]	16	16	16	26	20	26	19
g / C, Green / Cycle	0.31	0.31	0.31	0.51	0.38	0.51	0.36
(v / s)_i Volume / Saturation Flow Rate	0.16	0.08	0.23	0.10	0.16	0.06	0.29
s, saturation flow rate [veh/h]	1262	1168	1720	1073	1827	1204	1817
c, Capacity [veh/h]	466	161	528	529	700	693	659
d1, Uniform Delay [s]	14.21	16.80	16.08	8.52	11.77	6.88	14.72
k, delay calibration	0.08	0.08	0.08	0.19	0.19	0.08	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	2.25	1.51	0.32	0.73	0.05	3.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.43	0.56	0.74	0.19	0.42	0.10	0.79
d, Delay for Lane Group [s/veh]	14.68	19.04	17.59	8.84	12.50	6.93	18.47
Lane Group LOS	B	B	B	A	B	A	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.71	0.93	3.66	0.48	2.17	0.32	5.24
50th-Percentile Queue Length [ft/ln]	42.71	23.29	91.49	11.90	54.30	8.03	130.92
95th-Percentile Queue Length [veh/ln]	3.08	1.68	6.59	0.86	3.91	0.58	8.99
95th-Percentile Queue Length [ft/ln]	76.88	41.92	164.69	21.42	97.73	14.45	224.75



**Movement, Approach, & Intersection Results**

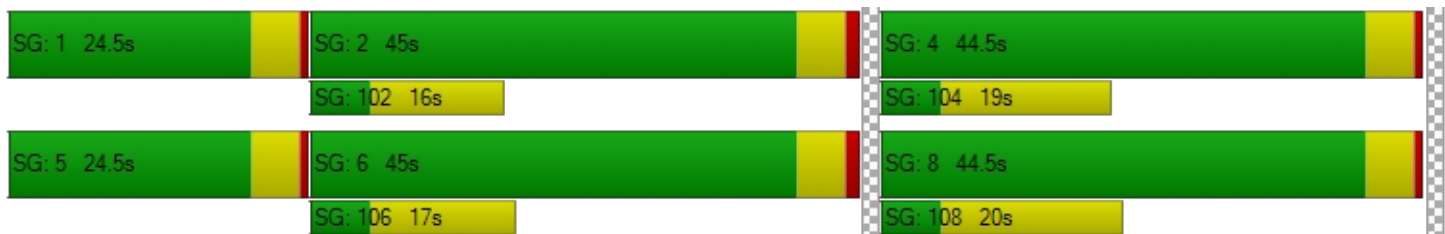
d_M, Delay for Movement [s/veh]	14.68	14.68	14.68	19.04	17.59	17.59	8.84	12.50	12.50	6.93	18.47	18.47
Movement LOS	B	B	B	B	B	B	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	14.68			17.86			11.55			17.06		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.69											
Intersection LOS	B											
Intersection V/C	0.770											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	17.62	17.62	17.62	17.62
I_p,int, Pedestrian LOS Score for Intersection	1.940	2.276	2.339	2.364
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1548	1548	1548	1548
d_b, Bicycle Delay [s]	1.32	1.32	1.32	1.32
I_b,int, Bicycle LOS Score for Intersection	1.891	2.350	2.218	2.535
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 122: 30th St & Western Blvd**

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

**Intersection Setup**

Name	30th St		Western Blvd		Western Blvd	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	30th St		Western Blvd		Western Blvd	
Base Volume Input [veh/h]	120	114	49	324	404	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	3.00	1.00	6.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	114	49	324	404	50
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	33	14	94	117	15
Total Analysis Volume [veh/h]	140	133	57	377	470	58
Pedestrian Volume [ped/h]	7		0		0	

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**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.55	0.23	0.06	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	34.80	13.29	8.72	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.00	0.91	0.18	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	74.97	22.63	4.41	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.32		1.14		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	5.78					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 123: 26th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.693

**Intersection Setup**

Name	26th St			26th St			Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Western Blvd			Western Blvd		
Base Volume Input [veh/h]	19	28	40	67	64	24	27	410	65	48	402	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	7.00	0.00	4.00	11.00	1.00	0.00	0.00	1.00	14.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	28	40	67	64	24	27	410	65	48	402	37
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	8	11	19	18	7	8	118	19	14	116	11
Total Analysis Volume [veh/h]	22	32	46	77	74	28	31	471	75	55	462	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	4			6			3			5		
v_di, Inbound Pedestrian Volume crossing in	3			5			4			6		
v_co, Outbound Pedestrian Volume crossing	21			17			18			22		
v_ci, Inbound Pedestrian Volume crossing mi	22			18			17			21		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	6			18			10			11		

Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	114
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	19.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	18.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	3	3	3	3	3	3	10	10	3	10	10
Maximum Green [s]	15	20	20	15	20	20	15	40	40	15	40	40
Amber [s]	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	17	17	0	17	17	0	18	18	0	23	23
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.5	3.0	3.0	2.5	3.0	3.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	44	44	44	44	44	44	44	44	44	44
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	3.00	0.00	3.00	3.00
g_i, Effective Green Time [s]	1	7	3	9	9	22	16	22	16	16
g / C, Green / Cycle	0.02	0.16	0.06	0.20	0.20	0.49	0.35	0.49	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.05	0.05	0.04	0.02	0.03	0.30	0.05	0.25	0.03
s, saturation flow rate [veh/h]	1810	1536	1709	1900	1354	988	1828	1046	1885	1392
c, Capacity [veh/h]	29	250	97	387	276	542	648	514	691	510
d1, Uniform Delay [s]	21.87	16.48	20.79	14.73	14.42	6.91	13.26	7.81	11.87	9.24
k, delay calibration	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.84	0.52	10.08	0.18	0.12	0.03	2.30	0.07	0.84	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.75	0.31	0.79	0.19	0.10	0.06	0.84	0.11	0.67	0.08
d, Delay for Lane Group [s/veh]	45.71	17.00	30.87	14.91	14.53	6.94	15.57	7.87	12.71	9.29
Lane Group LOS	D	B	C	B	B	A	B	A	B	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.41	0.67	1.00	0.57	0.21	0.11	4.39	0.20	3.19	0.23
50th-Percentile Queue Length [ft/ln]	10.17	16.71	24.96	14.32	5.35	2.83	109.63	5.11	79.81	5.67
95th-Percentile Queue Length [veh/ln]	0.73	1.20	1.80	1.03	0.39	0.20	7.82	0.37	5.75	0.41
95th-Percentile Queue Length [ft/ln]	18.30	30.08	44.93	25.78	9.64	5.10	195.48	9.20	143.66	10.21

**Movement, Approach, & Intersection Results**

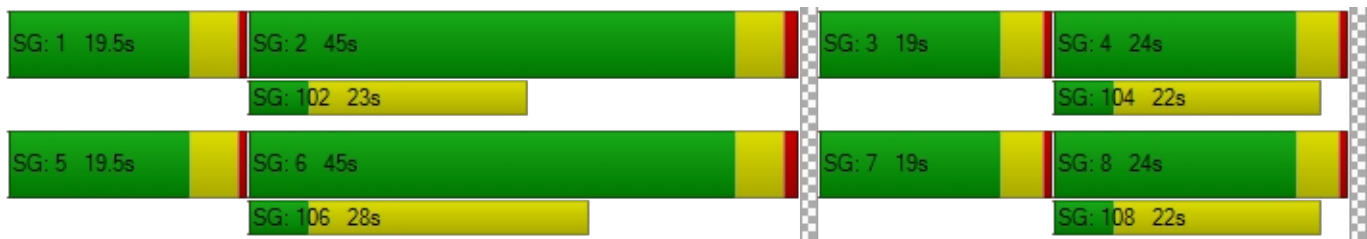
d_M, Delay for Movement [s/veh]	45.71	17.00	17.00	30.87	14.91	14.53	6.94	15.57	15.57	7.87	12.71	9.29
Movement LOS	D	B	B	C	B	B	A	B	B	A	B	A
d_A, Approach Delay [s/veh]	23.32			21.71			15.10			11.97		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.28											
Intersection LOS	B											
Intersection V/C	0.693											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	14.16	14.16	14.16	14.16
I_p,int, Pedestrian LOS Score for Intersection	2.017	2.171	2.258	2.376
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	899	899	1798	1798
d_b, Bicycle Delay [s]	6.76	6.80	0.23	0.23
I_b,int, Bicycle LOS Score for Intersection	1.725	1.855	2.512	2.484
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	7	515	469	13	51	23
Future Vol, veh/h	7	515	469	13	51	23
Conflicting Peds, #/hr	8	0	0	8	1	8
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	86	86	86	86	86	86
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	8	599	545	15	59	27

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	568	0	-	0	1177 569
Stage 1	-	-	-	-	561 -
Stage 2	-	-	-	-	616 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1014	-	-	-	213 525
Stage 1	-	-	-	-	575 -
Stage 2	-	-	-	-	543 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1007	-	-	-	207 518
Mov Cap-2 Maneuver	-	-	-	-	207 -
Stage 1	-	-	-	-	564 -
Stage 2	-	-	-	-	539 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	26.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1007	-	-	-	254
HCM Lane V/C Ratio	0.008	-	-	-	0.339
HCM Control Delay (s)	8.6	0	-	-	26.3
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.4

**Intersection Level Of Service Report**  
**Intersection 125: 15th St & Western Blvd**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

**Intersection Setup**

Name	15th St						Western Blvd			Western Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	50.00	100.00	100.00	100.00	100.00	100.00	60.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St						Western Blvd			Western Blvd		
Base Volume Input [veh/h]	48	117	44	58	152	129	135	388	53	21	310	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	2.00	2.00	5.00	4.00	1.00	0.00	10.00	0.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	117	44	58	152	129	135	388	53	21	310	48
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	32	12	16	41	35	37	105	14	6	84	13
Total Analysis Volume [veh/h]	52	127	48	63	165	140	147	422	58	23	337	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	29			10			10			29		
v_di, Inbound Pedestrian Volume crossing in	29			10			10			29		
v_co, Outbound Pedestrian Volume crossing	7			11			6			10		
v_ci, Inbound Pedestrian Volume crossing mi	6			10			7			11		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	7			24			12			9		

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**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	18.5
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	15.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	5	5	4	5	5	4	10	10	4	10	10
Maximum Green [s]	15	20	20	15	20	20	15	40	40	15	40	40
Amber [s]	3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	3.5
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Split [s]	30	30	30	30	30	30	30	30	30	30	30	30
Vehicle Extension [s]	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0	1.5	3.0	3.0
Walk [s]	0	6	6	0	6	6	0	6	6	0	6	6
Pedestrian Clearance [s]	0	11	11	0	11	11	0	10	10	0	10	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	1.5	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	45	45	45	45	45	45	45	45
L, Total Lost Time per Cycle [s]	3.50	4.00	3.50	4.00	3.50	4.00	3.50	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	1.50	2.00	1.50	2.00	1.50	2.00	1.50	2.00
g_i, Effective Green Time [s]	2	11	2	11	5	16	1	12
g / C, Green / Cycle	0.04	0.24	0.05	0.24	0.11	0.36	0.02	0.27
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.04	0.19	0.08	0.26	0.01	0.21
s, saturation flow rate [veh/h]	1810	1720	1781	1644	1752	1832	1667	1835
c, Capacity [veh/h]	77	412	87	403	191	660	37	502
d1, Uniform Delay [s]	21.48	14.67	21.36	15.93	19.74	12.63	22.06	15.24
k, delay calibration	0.04	0.11	0.04	0.11	0.04	0.11	0.04	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.71	0.70	4.24	2.92	2.47	1.55	5.91	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.67	0.43	0.73	0.76	0.77	0.73	0.61	0.77
d, Delay for Lane Group [s/veh]	25.19	15.37	25.61	18.85	22.21	14.19	27.97	17.84
Lane Group LOS	C	B	C	B	C	B	C	B
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.58	1.43	0.70	2.81	1.47	3.66	0.28	3.46
50th-Percentile Queue Length [ft/ln]	14.59	35.78	17.43	70.30	36.79	91.53	7.04	86.51
95th-Percentile Queue Length [veh/ln]	1.05	2.58	1.26	5.06	2.65	6.59	0.51	6.23
95th-Percentile Queue Length [ft/ln]	26.26	64.40	31.38	126.54	66.23	164.75	12.68	155.72

**Movement, Approach, & Intersection Results**

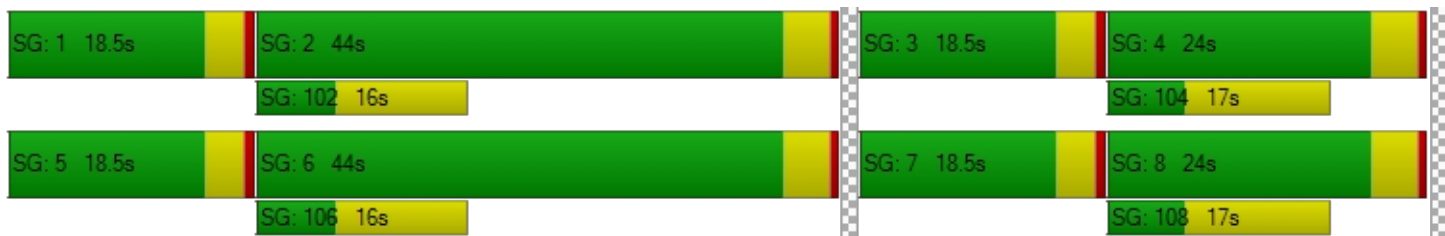
d_M, Delay for Movement [s/veh]	25.19	15.37	15.37	25.61	18.85	18.85	22.21	14.19	14.19	27.97	17.84	17.84
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.62			20.00			16.07			18.40		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	17.76											
Intersection LOS	B											
Intersection V/C	0.762											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	10.0	10.0	10.0	10.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	13.80	13.80	13.80	13.80
I_p,int, Pedestrian LOS Score for Intersection	2.031	2.128	2.278	2.210
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	881	881	1763	1763
d_b, Bicycle Delay [s]	7.13	7.19	0.32	0.32
I_b,int, Bicycle LOS Score for Intersection	1.934	2.167	2.594	2.239
Bicycle LOS	A	B	B	B

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 126: 35th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

**Intersection Setup**

Name	35th St			35th St			US 20			US 20		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	160.00	100.00	100.00	110.00	100.00	100.00	360.00	100.00	125.00	490.00	100.00	140.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	35th St			35th St			US 20			US 20		
Base Volume Input [veh/h]	14	104	149	100	156	29	23	680	12	111	659	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	3.00	0.00	7.00	8.00	3.00	5.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	104	149	100	156	29	23	680	12	111	659	53
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	30	42	28	44	8	7	193	3	32	187	15
Total Analysis Volume [veh/h]	16	118	169	114	177	33	26	773	14	126	749	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			1			2			2		
v_di, Inbound Pedestrian Volume crossing in	2			2			1			2		
v_co, Outbound Pedestrian Volume crossing	1			0			1			0		
v_ci, Inbound Pedestrian Volume crossing mi	1			0			1			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	1			14			0			1		



Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	126.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

**Phasing & Timing**

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	8	7	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	4	6	6	4	6	6	4	10	10	4	10	10
Maximum Green [s]	12	20	20	12	20	20	12	52	52	15	55	55
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	17	25	25	17	25	25	17	58	58	20	61	61
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	0	10	10	0	9	9	0	8	8	0	7	7
Pedestrian Clearance [s]	0	19	19	0	20	20	0	11	11	0	10	10
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	6.00	6.00	4.50	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.50	0.00	2.50	2.50	4.00	4.00	2.50	4.00	4.00
g_i, Effective Green Time [s]	35	23	35	29	2	60	60	10	68	68
g / C, Green / Cycle	0.29	0.19	0.29	0.24	0.02	0.50	0.50	0.09	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.09	0.11	0.01	0.43	0.01	0.07	0.41	0.04
s, saturation flow rate [veh/h]	1267	1686	1295	1832	1810	1795	1510	1767	1825	1582
c, Capacity [veh/h]	336	318	283	437	37	894	752	152	1028	891
d1, Uniform Delay [s]	31.08	47.61	34.11	39.32	57.97	16.98	10.19	52.23	9.87	6.66
k, delay calibration	0.08	0.28	0.08	0.08	0.08	0.50	0.50	0.08	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	20.21	0.68	0.61	16.03	10.93	0.05	8.23	4.52	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.90	0.40	0.48	0.70	0.86	0.02	0.83	0.73	0.07
d, Delay for Lane Group [s/veh]	31.13	67.82	34.79	39.93	74.00	27.90	10.23	60.46	14.40	6.80
Lane Group LOS	C	E	C	D	E	C	B	E	B	A
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.34	10.22	2.61	5.46	0.93	14.40	0.13	3.87	7.38	0.42
50th-Percentile Queue Length [ft/ln]	8.57	255.44	65.22	136.52	23.20	360.01	3.34	96.87	184.46	10.45
95th-Percentile Queue Length [veh/ln]	0.62	15.46	4.70	9.29	1.67	20.62	0.24	6.97	11.83	0.75
95th-Percentile Queue Length [ft/ln]	15.42	386.49	117.40	232.33	41.77	515.60	6.01	174.36	295.82	18.81

**Movement, Approach, & Intersection Results**

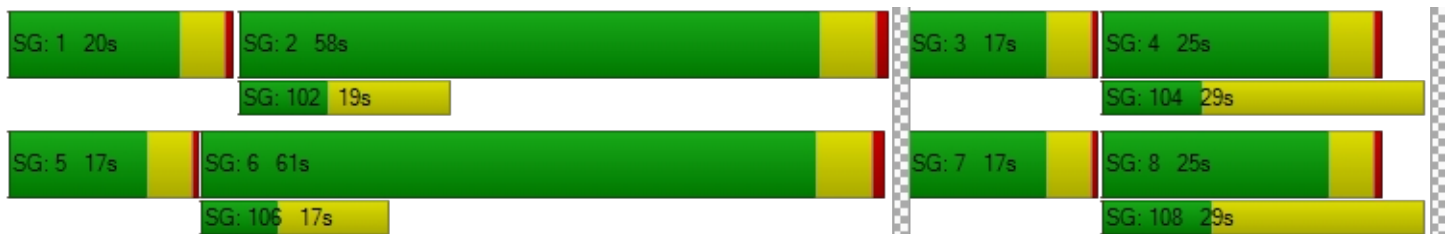
d_M, Delay for Movement [s/veh]	31.13	67.82	67.82	34.79	39.93	39.93	74.00	27.90	10.23	60.46	14.40	6.80
Movement LOS	C	E	E	C	D	D	E	C	B	E	B	A
d_A, Approach Delay [s/veh]	65.88			38.12			29.07			20.12		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	31.48											
Intersection LOS	C											
Intersection V/C	0.834											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	12.0	11.0	13.0	14.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	48.59	49.50	47.70	46.81
I_p,int, Pedestrian LOS Score for Intersection	2.121	2.097	2.738	2.904
Crosswalk LOS	B	B	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	342	342	867	917
d_b, Bicycle Delay [s]	41.27	41.54	19.26	17.61
I_b,int, Bicycle LOS Score for Intersection	2.060	2.094	2.901	3.102
Bicycle LOS	B	B	C	C

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 127: 26th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

**Intersection Setup**

Name	26th St			26th St			US 20			US 20		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	100.00	400.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			US 20			US 20		
Base Volume Input [veh/h]	4	17	51	136	23	9	8	929	2	55	807	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	6.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	2.00	3.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	17	51	136	23	9	8	929	2	55	807	40
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	15	39	7	3	2	267	1	16	232	11
Total Analysis Volume [veh/h]	5	20	59	156	26	10	9	1068	2	63	928	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	1			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			1			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	2			6			1			4		

Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	19.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	8	8	8	8	8	8	4	10	10	4	10	10
Maximum Green [s]	25	25	25	25	25	25	15	67	67	12	64	64
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	20	73	73	17	70	70
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	0	0	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	0	0	17	17	17	0	6	6	0	11	11
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	2.50	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	20	20	1	81	81	83	83	83
g / C, Green / Cycle	0.17	0.17	0.01	0.67	0.67	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.00	0.59	0.00	0.10	0.50	0.03
s, saturation flow rate [veh/h]	1652	1251	1810	1825	1582	619	1855	1542
c, Capacity [veh/h]	313	267	16	1225	1062	374	1283	1067
d1, Uniform Delay [s]	43.66	49.69	59.03	3.83	2.07	8.51	1.98	1.45
k, delay calibration	0.08	0.21	0.08	0.50	0.50	0.34	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	6.97	19.34	8.68	0.00	0.67	3.56	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.27	0.72	0.55	0.87	0.00	0.17	0.72	0.04
d, Delay for Lane Group [s/veh]	44.00	56.65	78.36	12.50	2.07	9.18	5.54	1.52
Lane Group LOS	D	E	E	B	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.25	6.21	0.35	6.06	0.01	0.18	3.07	0.10
50th-Percentile Queue Length [ft/ln]	56.17	155.36	8.85	151.57	0.14	4.43	76.75	2.53
95th-Percentile Queue Length [veh/ln]	4.04	10.30	0.64	10.10	0.01	0.32	5.53	0.18
95th-Percentile Queue Length [ft/ln]	101.11	257.57	15.94	252.53	0.26	7.97	138.15	4.55

**Movement, Approach, & Intersection Results**

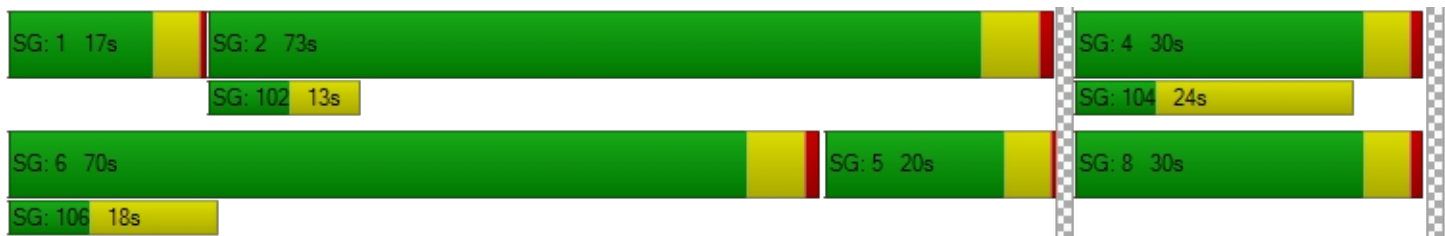
d_M, Delay for Movement [s/veh]	44.00	44.00	44.00	56.65	56.65	56.65	78.36	12.50	2.07	9.18	5.54	1.52
Movement LOS	D	D	D	E	E	E	E	B	A	A	A	A
d_A, Approach Delay [s/veh]	44.00			56.65			13.03			5.58		
Approach LOS	D			E			B			A		
d_I, Intersection Delay [s/veh]	14.39											
Intersection LOS	B											
Intersection V/C	0.884											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	25.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	37.60
I_p,int, Pedestrian LOS Score for Intersection	1.876	1.837	2.891	3.204
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	417	417	1117	1067
d_b, Bicycle Delay [s]	37.64	37.72	11.71	13.09
I_b,int, Bicycle LOS Score for Intersection	1.698	1.876	3.340	3.271
Bicycle LOS	A	A	C	C

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





**Intersection Level Of Service Report**  
**Intersection 128: 15th St & US 20**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

**Intersection Setup**

Name	15th St			15th St			US 20			US 20		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	400.00	100.00	200.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	15th St			15th St			US 20			US 20		
Base Volume Input [veh/h]	75	49	17	108	45	60	34	936	132	13	762	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	4.00	2.00	2.00	0.00	5.00	1.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	49	17	108	45	60	34	936	132	13	762	66
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	14	5	30	13	17	9	260	37	4	212	18
Total Analysis Volume [veh/h]	83	54	19	120	50	67	38	1040	147	14	847	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	2			2			2			1		
v_di, Inbound Pedestrian Volume crossing in	2			1			2			2		
v_co, Outbound Pedestrian Volume crossing	5			5			5			5		
v_ci, Inbound Pedestrian Volume crossing mi	5			5			5			5		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	7			21			0			7		

Version 2021 (SP 0-6)

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	1 - Coordination Group
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	14.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	8	8	8	4	4	4	5	2	2	1	6	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	8	8	8	8	8	8	4	10	10	4	10	10
Maximum Green [s]	25	25	25	25	25	25	12	64	64	15	67	67
Amber [s]	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0
All red [s]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.5	1.0	1.0
Split [s]	30	30	30	30	30	30	17	70	70	20	73	73
Vehicle Extension [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.2	5.2	2.5	5.2	5.2
Walk [s]	8	8	8	7	7	7	0	7	7	0	11	11
Pedestrian Clearance [s]	20	20	20	16	16	16	0	11	11	0	9	9
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	2.5	4.0	4.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	6.0	6.0	6.0	6.0	6.0	6.0	20.0	6.0	6.0	20.0	6.0	6.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	6.00	6.00	4.50	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	4.00	4.00	2.50	4.00	4.00
g_i, Effective Green Time [s]	23	23	3	81	81	2	79	79
g / C, Green / Cycle	0.19	0.19	0.03	0.67	0.67	0.01	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.12	0.17	0.02	0.57	0.09	0.01	0.46	0.05
s, saturation flow rate [veh/h]	1307	1381	1810	1825	1597	1810	1855	1573
c, Capacity [veh/h]	291	304	50	1231	1077	24	1224	1038
d1, Uniform Delay [s]	44.54	47.91	57.41	3.42	2.04	58.60	3.45	2.49
k, delay calibration	0.09	0.28	0.08	0.50	0.50	0.08	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	10.52	16.19	7.23	0.26	15.39	3.22	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.54	0.78	0.76	0.85	0.14	0.58	0.69	0.07
d, Delay for Lane Group [s/veh]	45.82	58.44	73.60	10.65	2.30	73.99	6.67	2.62
Lane Group LOS	D	E	E	B	A	E	A	A
Critical Lane Group	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.41	7.89	1.33	5.31	0.42	0.52	3.86	0.24
50th-Percentile Queue Length [ft/ln]	110.29	197.23	33.34	132.83	10.49	12.88	96.48	6.02
95th-Percentile Queue Length [veh/ln]	7.86	12.50	2.40	9.09	0.76	0.93	6.95	0.43
95th-Percentile Queue Length [ft/ln]	196.41	312.39	60.00	227.34	18.88	23.18	173.66	10.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.82	45.82	45.82	58.44	58.44	58.44	73.60	10.65	2.30	73.99	6.67	2.62
Movement LOS	D	D	D	E	E	E	E	B	A	E	A	A
d_A, Approach Delay [s/veh]	45.82			58.44			11.60			7.37		
Approach LOS	D			E			B			A		
d_I, Intersection Delay [s/veh]	16.49											
Intersection LOS	B											
Intersection V/C	0.848											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	15.0	11.0	12.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	45.94	49.50	48.60
I_p,int, Pedestrian LOS Score for Intersection	1.878	1.889	3.075	3.087
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	425	425	1067	1117
d_b, Bicycle Delay [s]	37.34	37.60	13.07	11.74
I_b,int, Bicycle LOS Score for Intersection	1.817	1.951	3.581	3.101
Bicycle LOS	A	A	D	C

**Sequence**

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



### Approach v/c Ratio Calculations - Weekday PM Peak Hour

Note: Vistro reports v/c ratios by movement, but not for approaches. Where there is a shared lane approach, the v/c ratio is reported as the weighted average of the individual movements. Calculations for the approach v/c ratios are provided below.

#### Intersection 103 - NB

Volume	7	20	201	
v/c ratio	0.05	0.11	0.34	
Weight	0.35	2.2	68.34	70.89
<b>Approach v/c</b>				<b>0.31</b>

#### Intersection 105 - EB

Volume	15	22	15	
v/c ratio	0.04	0.07	0.02	
Weight	0.6	1.54	0.3	2.44
<b>Approach v/c</b>				<b>0.05</b>

#### Intersection 107 - SB

Volume	34	6	30	
v/c ratio	0.14	0.02	0.07	
Weight	4.76	0.12	2.1	6.98
<b>Approach v/c</b>				<b>0.10</b>

#### Intersection 110 - WB

Volume	41	0	30	
v/c ratio	0.17	0	0.06	
Weight	6.97	0	1.8	8.77
<b>Approach v/c</b>				<b>0.12</b>

#### Intersection 111 - WB

Volume	40	4	11	
v/c ratio	0.18	0.02	0.02	
Weight	7.2	0.08	0.22	7.5
<b>Approach v/c</b>				<b>0.14</b>

#### Intersection 113 - SB

Volume	15	71	26	
v/c ratio	0.04	0.17	0.04	
Weight	0.6	12.07	1.04	13.71
<b>Approach v/c</b>				<b>0.12</b>

#### Intersection 118 - NB

Volume	8	0	42	
v/c ratio	0.02	0	0.08	
Weight	0.16	0	3.36	3.52
<b>Approach v/c</b>				<b>0.07</b>

#### Intersection 120 - WB

Volume	90	0	46	
v/c ratio	0.46	0	0.11	
Weight	41.4	0	5.06	46.46
<b>Approach v/c</b>				<b>0.34</b>