OSU Parking Utilization

AND

Neighborhood Street Parking Study

Fall Term 2007
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The purpose of this study is for the University to analyze parking utilization on the OSU main campus and to perform an on-street parking survey on the two residential parking districts north of the campus (see map Attachment A - Parking Survey Overview Map). The main campus study is used to determine and analyze existing supply and demand as well as identifying parking trends on campus. OSU conducts a parking inventory during the fall term when enrollment is highest. As stated in the Campus Master Plan (CMP), vehicular parking improvements will be implemented if the campus occupancy rate reaches 90%. Neighborhood surveys on the north side of campus, where many classroom buildings but few parking lots exist, are used to assist in measuring and monitoring the impact of parking on the neighborhoods.

Results of this study indicate that parking utilization on campus for 2007 is at 75%. Utilization has increased by 2% over 2006 while the population of the campus increased by 1.7% (404 people). Factors that may have amplified the increase in utilization is the extension of free parking on campus up to the week of the survey so new computer management software could be implemented by Transit and Parking Services (TAPS) and fluctuation in supply due to construction activities. The increased utilization is in line with the population increase and shows a slight percentage decrease in the campus population parking on campus.

OSU permits issued decreased by 336 (a 485 student decrease & 149 Faculty/Staff increase) or 5%. The apparent decrease in demand of parking permits may be partially attributable to students no longer having the option to directly bill to their accounts starting this year (as they have in the past) which requires them to pay in person. Another factor that may contribute to the decrease is the extension of free parking on campus as previously stated (for those who put off purchasing a permit).

The overall total of parking district A and B utilization did not increase although there was a slight shift in the districts. College Hill West (District A) had a increase of 3% while North College Hill (District B) decreased by 3%.

The study was conducted during the fall academic term during the 4th week of the school (16-17 October, 2007 , from 10:00 AM to 12:00 PM on campus and from 9:00 AM to 1:00 PM off campus). This time period is when the campus is considered at peak occupancy and is typical for reporting statistics for 4-year colleges and universities. The study was conducted over a 2-day period on a typical laboratory day (Tuesday) and typical lecture day (Wednesday) representing peak days within the week.
OSU Main Campus Parking Survey

An inventory of vacant parking spaces was completed one time on each day of the survey. The campus survey was completed by Campus Planning and TAPS.

Campus Population & Parking Capacity

To effectively evaluate how OSU is planning existing and future parking needs, Figure 1 (OSU Population Breakdown) below shows the campus population trend. Over the past five years the total campus population has increased approximately 1.4% with the largest percent increase being between 2006 and 2007 which had an increase of 1.7%.

Campus parking consists of a parking structure and a variety of parking lots: permit-regulated, metered, and open parking. On-street parking is available on 11th, 13th, 14th and 15th streets campus way west of 30th street and other roadways adjacent to the campus. The lots and on-street spaces on campus are mainly controlled by the OSU permit system except for one “open” parking lot that is free for anyone to use. The “open” lot is located on Campus way west of the Motor Pool parking lot. Parking lots are serviced by a free shuttle service which
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January, 2008

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consists of two buses that continually run on schedule throughout campus from 7:30 a.m. to 6:30 p.m and connect to the Corvallis Transit bus system.

OSU’s parking management program employs a permit system for most of the parking lots, a pay-lot system for short-term metered parking, a campus shuttle and enforced parking. Permits are sold by use type: faculty/staff, student, emeritus, motorcycle, and visitor. Parking spaces within lots are assigned according to their permitted use. Those with faculty/staff permits are also allowed to use the student lots. Special permits are available for service vehicles and visitors on campus.

Figure 2 (OSU Parking Capacity and Enrollment Trend) shows the breakdown of assigned parking spaces relative to campus population. Overall parking spaces decreased by 136 spaces from 2006 and 2007. The decrease in parking spaces is attributed mainly to paving and construction staging in the Reser Stadium lot and Lasells Lot respectively as well as the elimination of parking on 14th/15th Street. The relative distribution of parking capacity by campus sector can be viewed in Attachment B - Parking Capacity by Campus Sector Map.

Parking utilization is calculated as the ratio of occupied spaces to the total number of spaces. A 90% utilization rate requires the University to construct new parking facilities. At this level of utilization drivers may spend considerable time circulating campus in search of a parking space. Based on the survey, OSU’s parking is at a utilization rate of 75% during peak hours. A detailed map
showing parking lot utilization by parking lot and campus sector is included as Attachment C - Campus Survey Results Map.

Parking Occupancy between 2006 and 2007 has increased by 2% from 73% to 75%. Figure 3 (Summary of Parking Capacity) and Table 1 (Summary of Parking Usage on Campus) show a comparison of parking utilization over the last five years. The increase may be the result of many factors but can be mainly attributed to the increase in population of the campus population (1.7%). Factors that may have amplified the increase in utilization is the extension of free parking on campus up to the week of the survey (for those who wait to purchase permits) and a decrease in the number of parking spaces on campus (due mainly to construction and striping of parking lots). The increased utilization is, however, in line with the campus population increase and actually shows a slight percentage decrease in the campus population parking on campus.

**Parking Demand (Permit Sales)**

Parking demand is defined by parking lot utilization or by the sale of campus parking permits. OSU uses parking demand ratios to project future demand in conjunction with parking lot utilization. The parking demand ratio is calculated by
either the ratio of permitted vehicles to campus population or the ratio of vehicles parked to campus population. Table 2 (OSU Peak Time Parking Demand Ratios) below shows the total number of parking permits by two categories: 1) faculty/staff; and 2) student.

### Table 2: OSU Peak Time Parking Demand Ratios

<table>
<thead>
<tr>
<th>Parking Demand Ratio</th>
<th>Faculty/Staff</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Headcount</td>
<td>40%</td>
<td>35%</td>
</tr>
<tr>
<td>% Parking Permits</td>
<td>75%</td>
<td>45%</td>
</tr>
<tr>
<td>% Occupancy Per Permit</td>
<td>65%</td>
<td>35%</td>
</tr>
</tbody>
</table>

The data in Table 2 indicates that 19% (14% Student, 40% Faculty/Staff) of the campus population parks on campus during peak time. During this same time 73% (78% Student, 65% Faculty/Staff) of those purchasing permits use them. Compared to 2006, the number of permits has decreased by 336 permits (decrease of 483 Students & increase of 145 Faculty/Staff) or 5%. The apparent decrease in demand of parking permits may be due to students no longer having the option to directly bill to their accounts which requires them to pay in person. Other factors effecting the decrease in permits may include the extension of free parking up to the week of the parking survey, increased ridership of the OSU shuttle on campus, increased OSU environmental awareness and the higher cost for fuel.

### Parking Utilization by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Parking Capacity (vehicles)</th>
<th>Parking Occupancy (vehicles)</th>
<th>% Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>112 130 130</td>
<td>107 111 122</td>
<td>96% 85% 93%</td>
</tr>
<tr>
<td>B</td>
<td>1.171 924 948</td>
<td>947 722 787</td>
<td>81% 78% 83%</td>
</tr>
<tr>
<td>C</td>
<td>2.759 2.653 2.637</td>
<td>2.590 2.406 2.460</td>
<td>94% 91% 93%</td>
</tr>
<tr>
<td>D</td>
<td>1.056 1.258 1.255</td>
<td>970 1.141 1.169</td>
<td>91% 90% 92%</td>
</tr>
<tr>
<td>E</td>
<td>251 295 253</td>
<td>187 251 192</td>
<td>75% 85% 76%</td>
</tr>
<tr>
<td>F</td>
<td>1.136 1.514 1.416</td>
<td>741 524 448</td>
<td>65% 35% 32%</td>
</tr>
<tr>
<td>G</td>
<td>1.561 1.351 1.351</td>
<td>785 805 883</td>
<td>50% 59% 65%</td>
</tr>
<tr>
<td>H</td>
<td>316 43 45</td>
<td>316 37 5</td>
<td>100% 85% 10%</td>
</tr>
<tr>
<td>J</td>
<td>0 0 0</td>
<td>0 0 0</td>
<td>n/a n/a n/a</td>
</tr>
<tr>
<td>Total</td>
<td>8.371 8.192 8.055</td>
<td>6.643 5.997 6.063</td>
<td>79% 73% 75%</td>
</tr>
</tbody>
</table>

The OSU Campus Master Plan divides the campus into nine sectors, each with its own development allocation, including parking. Table 3 (Summary of Parking Usage on Campus by Sector) shows parking demand and utilization for by campus sector. Attachment B - Parking Capacity by Campus Sector Map shows a map depicting relative sector parking capacity by sector. Attachment C - Campus Survey Results Map shows a map depicting sector utilization as well as individual parking lot utilization.
On a sector by sector basis (excluding sector J that has no parking) only Sector F maintains less than 50% of utilized capacity. Sector F’s lack of utilization (32%) is mainly attributable to the Reser Stadium parking lot being underutilized (3% on average). Sector H shows underutilization (10%) less than 50% but does not hold a significant amount of parking capacity (46 spaces), is only used for athletic events and is not patrolled by TAPS. Sector G’s lack of utilization (65%) is mainly attributable to the underutilization of the parking structure (54% on average).

**Neighborhood Street Parking Study**

The Neighborhood Street Parking Study was completed during the same days as the OSU Main Campus Parking Study (October 16 and October 17) which is representative of peak student attendance on campus. The study included hourly surveys starting on the hour from 9:00 AM to 1:00 PM for the College Hill West (District A) and North College Hill (District B) districts north of the OSU main campus. The survey was orchestrated by Campus Planning and performed by Facilities Services personnel and student workers. Personnel performing the survey met with Campus Planning staff prior to the study for instructions about data methodology and collection. A graphical representation of the results for 2006 and 2007 is indicated in Figure 4 (Summary of Overall Neighborhood Parking Usage).

![Figure 4: Summary of Overall Neighborhood Parking Usage](image-url)
DISTRICT FINDINGS

The College Hill West (District A) parking district is bounded between 27th and 32nd Streets east/west and between Van Buren and Johnson Avenue north/south. The North College Hill (District B) district is bounded between 14th and 24th Street east/west and between Harrison Blvd. and Monroe Avenue north/south. The overall street parking utilization by time period for this survey is indicated in Table 4 and a summary is shown in Figure 4. Street capacity is determined by utilizing a standard parking space of 22’ x 18’ for contiguous parking and 18’ x 8’ for single parking. Because streets are unmarked more compact vehicles can be fit into a series of unmarked spaces than is indicative of capacity.

SUMMARY OF DISTRICT A FINDINGS

As shown in Table 4 and Figure 4 above, District A has an overall average utilization rate of 71% over the period of the survey. This indicates a 3% increase over last year’s survey. Side streets nearer to campus (see Attachment D - Neighborhood Street Parking Survey Results District A (College Hill West)) shows to be over or near capacity which may indicate possible OSU affiliated parking.

Based on the assumption that vehicles without parking district permits are OSU affiliated possible causes of the increase in parking utilization of the district could be attributed to the nearness of the open campus parking lot and/or that restrictions set by the city do not sufficiently deter OSU affiliated parking.

Vehicles with OSU parking permits (hang tags) are also another indication of student parking. An average of 14 (7% of capacity) OSU parking permits were found during the survey period.

SUMMARY OF DISTRICT B FINDINGS

As shown in Table 4 and Figure 4d, District B has an overall average utilization rate of 96% over the period of the survey. This indicates a 3% decrease over last year’s survey. Many of the streets show to be over 100% capacity (see Attachment E - Neighborhood Street Parking Survey Results District B (North College Hill) Map) that are nearer to the campus which indicates possible OSU affiliated parking. Capacity utilization of this district may also reflect lunchtime parking.

Vehicles with OSU parking permits (hang tags) are also another indication of student parking. An average of 29 (11% of capacity) OSU parking permits were found during the survey period.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>College Hill (District A)</th>
<th>North College Hill (District B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Restricted Permits</td>
<td>Non-Permit Occupied</td>
</tr>
<tr>
<td>00:00 AM to 10:00 AM</td>
<td>57</td>
<td>82</td>
</tr>
<tr>
<td>10:00 AM to 11:00 AM</td>
<td>52</td>
<td>109</td>
</tr>
<tr>
<td>11:00 AM to 12:00 PM</td>
<td>56</td>
<td>91</td>
</tr>
<tr>
<td>12:00 PM to 01:00 PM</td>
<td>57</td>
<td>67</td>
</tr>
<tr>
<td>Average</td>
<td>55</td>
<td>87</td>
</tr>
</tbody>
</table>

Table 4: Hourly Neighborhood Street Parking Utilization during Survey
OVERALL SUMMARY OF DISTRICTS A AND B

Together the neighborhood districts north of the campus show an 85% street parking utilization rate. This indicates a 0% decrease over last year’s survey with a slight shift of increased parking to District A (opposite of last year). The decrease may be attributed to many factors including new housing, location of free parking on campus, on/off campus enforcement, student parking and/or driving behavior and inclement weather during survey.

DISTRICT PARKING UTILIZATION STRATEGIES

Strategies that may be considered to improve parking both at OSU and in the residential districts include but are not limited to the following:

- Analysis of the parking study indicates that an average of 42% of the vehicle parked in the district do not have district parking permits. The number of non-district permitted vehicles may be reduced if parking enforcement was increased in the neighborhoods in effort to change parking behavior.

- The City of Corvallis does not stripe parking spaces in the neighborhoods. Analysis shows that more cars are parked on streets than what is available (based on 22’ x 8’ standard contiguous parking spaces and 18’ x 8’ single parking spaces). Parking on streets where parking is over 100% of capacity (“hot spots”) may be reduced by striping of individual parking spaces.

- OSU will continue to complete the City of Corvallis Neighborhood Parking District Study every 5 years (next study to be accomplished in in 2013 in conjunction with the annual OSU parking utilization study) to identify potential strategies to establish and maintain acceptable parking utilization rates within the existing neighborhood parking districts.
ADDITIONAL INFORMATION/CONTACTS

For additional information and or questions concerning this report contact the following.

- Robert Monasky, Land Use Analyst,
  541-737-0456, Robert.Monasky@OregonState.edu
- Patty McIntosh, Campus Planning Manager
  541-737-0917, Patty.McIntosh@OregonState.edu
ATTACHMENTS

- ATTACHMENT A - PARKING SURVEY OVERVIEW MAP
- ATTACHMENT B - PARKING CAPACITY BY CAMPUS SECTOR MAP
- ATTACHMENT C - CAMPUS SURVEY RESULTS MAP
- ATTACHMENT D - NEIGHBORHOOD STREET PARKING SURVEY RESULTS DISTRICT A (COLLEGE HILL WEST) MAP
- ATTACHMENT E - NEIGHBORHOOD STREET PARKING SURVEY RESULTS DISTRICT B (NORTH COLLEGE HILL) MAP
### Parking Capacity by Campus Sector

#### Vehicle Capacity*

- **CapStudent**: 4,161, 52%
- **CapFaculty**: 1,950, 24%
- **CapADA**: 248, 3%
- **CapOther**: 1,697, 21%

*Number represents total parking spaces for sector.

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**Campus Parking Capacity by Type**

(Total Capacity = 8,056 spaces)

- **Student**: 4,161 (52%)
- **CapADA**: 248 (3%)
- **Faculty**: 1,950 (24%)
- **CapOther**: 1,697 (21%)
- **Other**: 1,097 (13%)

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**Attachment B**

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2007 Parking Utilization Study

Parking Capacity by Campus Sector
2007 Neighborhood Street Parking Survey Results

District A
(College Hill West)

*Parking capacity based on Corvallis Land Development Code regulations (Vehicle Capacity indicated in callout)

Attachment D
2007 Neighborhood Street Parking Survey Results

District B (North College Hill)

*Parking capacity based on Corvallis Land Development Code regulations (Vehicle Capacity indicated in callout)