Parking Operations
Program Review
July 2010
Prepared by: Pacific Intermountain Parking & Transportation Association
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INTRODUCTION

Cindy Campbell, Casey Jones, CAPP, Patrick Kass, CAPP and Josh Kavanagh, CAPP conducted a program review of the University of Hawai‘i at Mānoa (UHM) Parking Operations in the spring of 2010 at the request of the University of Hawai‘i Office of Internal Audit (Internal Audit) pursuant to the fiscal year 2010 audit plan. See Appendix A for Peer Team Biographies. The review consisted of several teleconference calls between Parking Operations Manager Ray Shito and the review team and a site visit and interviews conducted over four days in early April, 2010. The site visit included several campus tours, observation of special event set up (UH vs. Fresno State Baseball), observation of morning gate operation, a meeting with Internal Audit and Auxiliary Services staff members, a facilities condition review, meetings with Parking Operations field and business office staff and several one on one meetings with Manager Shito.

In advance of the on-site portion of the review peer team members received appropriate background documents, became familiar with the department through its website and discussed review goals and objectives extensively with Manager Shito. Reviewed documents are included in Appendix B. In sum, the team felt well prepared in large part due to the exceptional organization and preparation on the part of Manager Shito, his staff and others at UHM.

This report provides observations and recommendations related to the areas we were asked to review. Recommendations are included in each section and summarized in a table following the report. Areas of evaluation are as follows:

Scope of Work

Fee Adequacy

1. Compare current fee schedule with those of peer sized institutions
2. Compare current fee schedule with those of other public and private parking structures in the Honolulu area
3. Review adequacy of fees to cover operating expenditures:
   a. Payroll, supplies, equipment, other
   b. Minor repair and maintenance projects
   c. Office of Hawaiian ceded land payments
4. Review adequacy of fees for major repair and replacement projects and future construction-in-progress (CIP) projects:
   a. Major Repair and Maintenance projects which may require Bond financing
   b. Additional structures as identified in UHM Long Range Development Plan
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Facilities

1. Evaluate entry kiosks, parking structures, surface lots, bicycle, moped, motorcycle lots, ADA parking, parking and traffic signage
   a. Compare to industry standards and peer sized institutions with similar operational requirements
   b. Review maintenance procedures for adequacy and appropriateness
   c. Evaluate condition of facilities
   d. Review repair and maintenance scheduled projects for appropriateness and timeliness
2. Evaluate the necessity of the future CIP projects

Operational Issues

1. Compare funding (fees, citations, government appropriations, etc.) of parking operations of peer sized institutions
2. Compare funding of repair and maintenance projects of peer sized institutions
3. Review the Schedule of Revenues and Expenses for the five years ended June 30, 2009. Comment on the types and volume of revenue and expenses in comparison to peer sized institutions.
4. Review and comment on the following policies and procedures of UHM parking operations in comparison of best practices and peer sized institutions
   a. Parking permit procedures (faculty, staff, students, outside vendors)
   b. Enforcement of parking rules and regulations
   c. Special/Athletic events
   d. Collection of daily parking fees
   e. Others as deemed necessary
5. Review and comment on the organization/structure/job function of the UHM parking operation as compared to industry best practices and peer sized institutions.

Peers Organizations and Selection Considerations

The Peer Team selected the following peer organizations for comparison throughout this review.

- University of Arizona
- University of Colorado at Boulder
- University of Wisconsin
- University of California – Santa Barbara
- San Francisco State University
- Boise State University
- California Polytechnic University – San Luis Obispo
Several criteria where used to determine which peers to select. Among them are the following:

- Size of university in terms of enrollment
- Size of university in terms of parking inventory
- Size of university in terms of geographic area
- Type of environment (urban, suburban)
- Presence of transit (internal and external operations)
- Climate
- Financial environment

We did not use all peer organizations for each element of this program review. Instead, we selected the most appropriate peers among the list that was prepared. For example, while Cal Poly San Luis Obispo is a suburban campus with approximately 2,000 more parking spaces than UHM, it may be more useful to compare these two schools from a financial environment perspective than, say, Boise State University. Similarly, while the University of Wisconsin-Madison has almost twice the parking inventory than UHM, its wetter climate may be more comparable to UHM than the University of Arizona. The following table summarizes the peer institutions and their characteristics.

Table 1: Peer Institution Characteristics

<table>
<thead>
<tr>
<th></th>
<th>University of Hawai‘i Mānoa</th>
<th>University of Arizona</th>
<th>University of Wisconsin</th>
<th>University of Colorado</th>
<th>UC Santa Barbara</th>
<th>San Francisco State University</th>
<th>Boise State University</th>
<th>Cal Poly San Luis Obispo</th>
<th>Average (or Mode)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>20,644</td>
<td>35,940</td>
<td>30,196</td>
<td>42,030</td>
<td>22,026</td>
<td>30,469</td>
<td>18,936</td>
<td>19,777</td>
<td>27,502</td>
</tr>
<tr>
<td>Campus Type</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
<td>Suburban</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
</tr>
<tr>
<td>Campus Size (acres)</td>
<td>320</td>
<td>380</td>
<td>786</td>
<td>935</td>
<td>1022</td>
<td>142</td>
<td>175</td>
<td>1321</td>
<td>635</td>
</tr>
<tr>
<td>Parking Inventory</td>
<td>5,740</td>
<td>17,000</td>
<td>11,086</td>
<td>8,431</td>
<td>6,700</td>
<td>3,172</td>
<td>7,663</td>
<td>8,792</td>
<td>8,698</td>
</tr>
<tr>
<td>Transit (Internal or External)</td>
<td>Internal</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
<td>Internal External</td>
</tr>
</tbody>
</table>

**FEE ADEQUACY**

We considered permit parking rates (on an annualized basis), visitor rates, metered parking, and the highest amount each institution charged per car for a special event. Among selected peer institutions UHM compares favorably with respect to the various rates it charges for parking on campus. Table 2 summarizes the various parking rates at peer institutions.
Table 2: Peer Institution Parking Fees

<table>
<thead>
<tr>
<th></th>
<th>University of Hawai‘i Mānoa</th>
<th>University of Arizona</th>
<th>University of Wisconsin</th>
<th>University of Colorado at Boulder</th>
<th>UC Santa Barbara</th>
<th>San Francisco State University</th>
<th>Boise State University</th>
<th>Cal Poly San Luis Obispo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On Campus Permit Parking</strong></td>
<td><strong>$387 - $525</strong></td>
<td><strong>$353 - $568</strong></td>
<td><strong>$495 - $1085</strong></td>
<td><strong>$360 - $546</strong></td>
<td><strong>$432</strong></td>
<td><strong>$215-$604</strong></td>
<td><strong>$158-$680</strong></td>
<td><strong>$168-$660</strong></td>
</tr>
<tr>
<td>Visitor Rates</td>
<td><strong>$4/hr</strong></td>
<td><strong>$2/hr, first 2 hrs</strong></td>
<td><strong>$6 half day</strong></td>
<td><strong>$1.75/hr, first 3 hrs</strong></td>
<td><strong>$3 for 1 hr, $4 for 2,</strong></td>
<td><strong>$1/hour</strong></td>
<td><strong>$1/hour</strong></td>
<td><strong>$5/day</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Max $16/day</strong></td>
<td><strong>Max $10</strong></td>
<td><strong>$3/hr thereafter</strong></td>
<td><strong>Max $5</strong></td>
<td><strong>Max $6 for 4</strong></td>
<td><strong>Max $5</strong></td>
<td><strong>Max $10</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>$4 lower campus and Hawaiian Studies (Dole Street) entry before 4PM, $5 flat rate after 4PM for all lots (upper campus, lower campus and Hawaiian Studies (Dole Street))</strong></td>
<td><strong>Max $8</strong></td>
<td><strong>$3 from 5pm-11:30pm</strong></td>
<td><strong>Max $8</strong></td>
<td><strong>Max $5</strong></td>
<td><strong>Max $10</strong></td>
<td><strong>Max $5</strong></td>
<td></td>
</tr>
<tr>
<td>Metered Parking</td>
<td><strong>N/A</strong></td>
<td><strong>$1.50/hr</strong></td>
<td><strong>$1.50/hr</strong></td>
<td><strong>$1.50/hr</strong></td>
<td><strong>$3/hr</strong></td>
<td><strong>N/A</strong></td>
<td><strong>$1/hour Max $10</strong></td>
<td><strong>$1.50/hr $2/hr premium</strong></td>
</tr>
<tr>
<td>Special Events</td>
<td><strong>$5</strong></td>
<td><strong>$5 - $10 based on Proximity to Event (Football)</strong></td>
<td><strong>$5 - $20 based on Proximity to Event (Football)</strong></td>
<td><strong>$20</strong></td>
<td><strong>$8</strong></td>
<td><strong>$5</strong></td>
<td><strong>$10</strong></td>
<td><strong>$6</strong></td>
</tr>
</tbody>
</table>

* Permit amounts are annualized accept where noted

For permitted annual parking, UHM appears to offer neither the highest annual permit (University of Wisconsin at $1,085) or the lowest (Boise State University at $158). UHM appears about in the middle of the peer group offering similar annual parking permit rates compared to Arizona, Colorado and Santa Barbara. Visitor rates for UHM are the highest of the group at $4/hour with the lowest being $1/hour. UHM provides special event visitor parking for $5 as
does San Francisco State University. However, UHM provides a discount of up to $1.00 per game with the purchase of a season parking pass (the entirety of the UHM Special Event Parking Program is outlined below). Arizona and Wisconsin also provide special event parking for $5/game but with rates based on venue proximity. Colorado and Wisconsin sell parking at the highest amount of $20 per vehicle. There are no on-street meters at UHM to compare against.

**Special event parking at UHM**

Season Parking Passes - The season parking pass is a parking pass sold to season ticket holders of a specific sport held in the lower campus. The cost of each sport’s pass is based on the number of regular season games multiplied by a reduced per entry rate (current parking rate is $5.00). Season parking passes are not valid for post season games.

**Season Passes Available for:**
- Men’s Volleyball - $4.25 per game
- Women’s Volleyball - $4.25 per game
- Men’s Basketball - $4.25 per game
- Women’s Basketball - $4.25 per game
- Men’s Baseball - $4.00 per game

Koa Anuenue Preferred Parking - This parking pass agreement was created to assist the Athletic Department in its efforts to raise funds by providing convenient parking accommodations for sporting events.
- Women’s Volleyball
- Men’s Volleyball
- Men’s Basketball
- Baseball

These passes are valid for designated Lower Campus parking areas. There are two designated reserved parking areas 1) First Floor of the Parking Structure and 2) behind the ROTC building. Each parking area will be reserved for a specified period of time:
- Basketball Games – end of half-time
- Volleyball Games – one hour into the game

There is no discount given for this parking pass. The cost of each pass is based on the number of games multiplied by the prevailing parking entry rate (currently $5.00). An additional charge of $312 per game is billed to the Athletic Department to cover the cost for manpower provided to reserve the parking area. The ‘Ahahui Koa Ānuenue (AKA) charges a premium charge for the parking passes. Koa Anuenue preferred parking passes are valid for post season games with payment of current parking fee at the gate.
Sports Marketing Sponsorship Program Parking - This parking pass agreement was created to satisfy parking requirements for Sports Marketing’s Sponsorship Program. The agreement includes a specified number of season parking passes and passes for reserved parking areas. Sports Marketing is billed for the number of passes used per game multiplied by a discounted per game parking rate. The Sports Marketing Section is billed the same cost of Koa Anuenue reserved parking passes issued to Sports Marketing.

Courtside Season Reserved Parking Pass - This parking pass agreement was created to assist the Athletic Department in its efforts to raise funds by providing convenient parking accommodations for sporting events.

- Women’s Volleyball
- Men’s Basketball

There is no discount given for this parking pass. The cost of each pass is based on the number of games multiplied by the prevailing parking entry rate (currently $5.00). The AKA charges a premium for the parking passes. Passes are issued in packets with individual game parking passes for the sponsors’ convenience. Courtside season parking passes are valid for post season games with payment of the current parking fee at the gate.

Athletic Department Visitor Parking Pass - This parking permit was created to accommodate important Athletic Department visitors, visiting dignitaries, and visiting teams’ vehicles. The cost of each pass is $8.00 and may be used from one to seven days. These passes are valid for parking areas in the Lower Campus. This parking pass was created to:

- Address complaints regarding official visitors and visiting teams’ vehicles being cited in error, or not allowed to enter the Lower Campus during periods when the Lower Campus parking structure is closed to daily parkers.
- Provide the Athletic Department a means to issue temporary parking passes in a timely manner, which avoids unnecessary conflicts with parking officers.

Parking Passes for Issue by the Athletic Department - This parking pass agreement was created to accommodate parking requirements of people providing various services to the Athletic Department. Passes are issued to team doctors, volunteer coaches, volunteers providing support for the various sports, etc. A combined total of 200 parking passes (Season and Annual passes) are allocated to the Athletic Department for this purpose. All pass requests are submitted through the Athletic Director to the Director of Auxiliary Services for approval. Each pass is designated a parking area in the Lower Campus at no cost to the Athletic Department. The cost of an annual parking pass for the lower campus is $387.00.
Parking for Sports Events - Parking Operations provides courtesy parking at no charge in a restricted area for game officials, statisticians, scoreboard operators, announcers, entertainers, anthem singers, and guests of the Athletic Department. A list is provided to Parking Operations prior to the scheduled event. Parking Operations reserves the right to determine the assignment of the parking location.

With the exception of the 200 parking passes issued to the Athletics Department at no charge, we find the special event parking program generally consistent with practices at peer institutions. UHM Parking Operations forgoes approximately $78,000 annually for free parking passes for Athletics which might be acceptable if the parking facilities on campus were in better physical condition. Since this is not the case, we recommend reviewing this agreement.

Recommendation 1: Review and reconsider how parking charges are assessed for Athletic Department use.

Local Parking Market

The peer team was asked to consider parking rates offered near UHM and in downtown Honolulu as a measure of the local parking market and how UHM parking rates compare. Select lots were identified by UHM staff and the peer team also traveled to downtown Honolulu to collect current rate information. Tables 3 and 4 identify select private lots and garages and their respective rates. Because private parking facilities are often managed with different objectives as compared to public parking facilities, caution must be used when comparing the two. Universities often charge less than what the market will bear because of their broad mission (providing higher education, conducting research, etc.). However, it is appropriate to consider how some rates compare to the broader market in order to understand local consumer expectations. It is also instructive to look to public parking rates as market maximums that the University may not wish to match but indicate the degree to which the University is under-pricing parking to facilitate a well-informed dialogue regarding the use of University resources.

Table 3: Parking Fees for Select Downtown Honolulu Private Lots

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Rate</th>
<th>Location</th>
<th>Type</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diamond Lot 3040 King Center 1451 S. King St</td>
<td>Hourly</td>
<td>$3 flat rate Sat, Sun holidays $2 flat evening</td>
<td>Diamond Lot 3319 CHURCH OF THE CROSSROADS 1212 University Ave</td>
<td>Hourly</td>
<td>$2 for 2 hrs $3 evening max</td>
</tr>
<tr>
<td>Varsity Theater</td>
<td>Daily Monthly</td>
<td>$6 $75</td>
<td>Pucks Alley 1035 University Ave Honolulu, HI 96826</td>
<td>Daily Monthly</td>
<td>$6 $75</td>
</tr>
</tbody>
</table>
Table 4: Parking Fees for Select Downtown Honolulu Private Garages

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Rate</th>
<th>Location</th>
<th>Type</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishop Square</td>
<td>Monthly Tenant</td>
<td>$360.00</td>
<td></td>
<td>Monthly Tenant</td>
<td>$200.00</td>
</tr>
<tr>
<td></td>
<td>Unreserved</td>
<td>$235.00</td>
<td></td>
<td>Unreserved</td>
<td>$175.00</td>
</tr>
<tr>
<td></td>
<td>Hourly Per 1/2 Hour</td>
<td>$8.00</td>
<td></td>
<td>Hourly Per 1/2 Hour</td>
<td>$3.00</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>$64.00</td>
<td></td>
<td>Maximum</td>
<td>$24.00</td>
</tr>
<tr>
<td>Waterfront Plaza</td>
<td>Monthly Tenant</td>
<td>Per Lease</td>
<td></td>
<td>Per Lease</td>
<td>$350-$400</td>
</tr>
<tr>
<td></td>
<td>Unreserved</td>
<td>Per Lease</td>
<td></td>
<td>Unreserved</td>
<td>$240.00</td>
</tr>
<tr>
<td></td>
<td>Hourly Per 1/2 Hour</td>
<td>$3.00</td>
<td></td>
<td>First 1/2 Hour</td>
<td>$0.75</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>$33.00</td>
<td></td>
<td>Each Addtl. 1/2 Hour</td>
<td>$1.50</td>
</tr>
<tr>
<td>Executive Centre</td>
<td>Monthly Tenant</td>
<td>$350.00</td>
<td></td>
<td>Monthly Tenant</td>
<td>$425.00</td>
</tr>
<tr>
<td></td>
<td>Unreserved</td>
<td>$230.00</td>
<td></td>
<td>Unreserved</td>
<td>$250.00</td>
</tr>
<tr>
<td></td>
<td>Motorcycle</td>
<td>$55.00</td>
<td></td>
<td>Motorcycle</td>
<td>$50.00</td>
</tr>
<tr>
<td></td>
<td>Hourly Per 1/2 Hour</td>
<td>$3.00</td>
<td></td>
<td>Per 1/2 Hour</td>
<td>$4.00</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>$45.00</td>
<td></td>
<td>Maximum</td>
<td>No Max</td>
</tr>
<tr>
<td>Pacific Guardian Center</td>
<td>Monthly Tenant</td>
<td>$350.00</td>
<td></td>
<td>Monthly Tenant</td>
<td>$314.14</td>
</tr>
<tr>
<td></td>
<td>Unreserved</td>
<td>$230.00</td>
<td></td>
<td>Unreserved</td>
<td>$209.42</td>
</tr>
<tr>
<td></td>
<td>Hourly Per 1/2 Hour</td>
<td>$3.00</td>
<td></td>
<td>Per 1/2 Hour</td>
<td>$3.00</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>$45.00</td>
<td></td>
<td>Maximum</td>
<td>$30.00</td>
</tr>
</tbody>
</table>

Visitor parking on the Mānoa Campus is available in the Lower Campus and Dole Street Parking Structures and in the green color Pay-to-Park visitor stalls located in parking lots near Dole Street. The campus parking structures charge a flat rate fee of $4.00 payable in advance at the entry kiosks prior to 4pm and a $5 flat fee after 4pm.

The Lower Campus parking structure hours are 5:00 a.m. to 11:59 p.m. Re-entry with a paid daily permit is allowed anytime within operational hours on the purchased date for both lower campus and Hawaiian Studies (Dole Street).

Visitors using the Pay-to-Park green stalls use automated Pay Stations located at that lot. These Pay Stations require a fee of $2.00 per half hour up to a maximum of $16.00. The purchase of a
$16.00 Pay-to-Park daily visitor permit from an automated Pay Station will allow re-entry into the Upper Campus visitor lots all day. The Upper Campus parking changes to a flat fee collection at 4:00 p.m. and on weekends. A fee of $5.00 is collected upon entry and parking is allowed in all regular parking stalls during these periods.

The various rates UHM charges for visitor parking do not appear to be significantly different than those charged in similar private parking facilities in the area. However, compared to some facilities, UHM is lower indicating that the market may support slightly higher visitor rates on campus. Such a change would need to be done after further analysis of close-in parking and potential spillover impacts into neighborhood areas adjacent to campus. It may be that with higher visitor rates, parkers will seek lower cost alternatives thus potentially impacting the attractiveness of visiting campus and town-gown relationships due to potentially degraded neighborhood circulation and access brought about by higher than appropriate parking fees on campus. Pricing structures (maximums, billing increments, etc.) should also be further reviewed on a site by site basis to ensure that they are supportive of the University’s overall parking strategy.

**Recommendation 2: Consider adjusting visitor parking rates.**

Annual parking permits appear to be significantly underpriced as compared to the local market. By charging sub-market prices for annual parking permits, the University is effectively providing a subsidy to parkers. This may be appropriate if it is supportive of University goals (staff recruitment and retention, accessibility for low income students that are not served by transit, etc.). However, the reason for and size of the subsidy should be carefully considered and weighed against alternative uses for the resources.

**Recommendation 3: Consider adjusting annual parking permit rates.**

**Fee Adequacy and Operating Expenses**

Because each parking operation is unique, it is challenging to make accurate “apples-to-apples” comparisons. Typically, the largest expense for parking organizations is for labor. Unlike many of its peers, UHM Parking Operations contracts out the majority of its labor, leaving a small internal operation by comparison. There are indeed some benefits to such an arrangement. First, contracted services often result in lower overall operating costs because contracted labor tends to have a lower hourly rate and lower benefits than internal staff. Second, contracted labor likely provides greater operational flexibility if the contract for such work allows the owner to scale operations to meet their needs.

Contracted services also have some disadvantages over organic staff. Lower wages and benefits for contracted workers can result in less productivity and employee retention. Contracted services also require well written and comprehensive contracts, standards and performance
measures. This requires an experienced contract manager on the owner side and good communications between the contractor and provider.

Chart 1: UHM Parking Operations Organization

By comparison, the Boise State University Transportation & Parking Services (BSU) organizational structure is included in Chart 2 below. Note that BSU’s total operating expenses are roughly $2.2 million less than UHM’s and BSU has a comparable allocation for salaries, wages and other employee related expenses.
Chart 2: Boise State University Transportation & Parking Services Organization
The University of Colorado Parking & Transportation Services (CU) has similar operating expenses compared to UHM but a greater allocation for salaries, wages, and other employee related expenses. Its structure follows in Chart 3 below. (Note that for comparison purposes the CU fleet and transit operation are excluded from the chart and from the operating expenses used in this report.)

Chart 3: University of Colorado Transportation and Commuter Services Organization

We have noted cost savings potential for outsourcing many of the functions, as is UHM’s practice. However, we note here that there are several weaknesses in the UHM approach that might be rectified with appropriate additional human resources. And as a self-funding enterprise, these resources could be funded by modest, but appropriate increases in parking fees.

Three areas stand out as weaknesses in the UHM Parking Operations organizational structure.
First, we would recommend additional IT resources organic to the parking department. Technology in the parking industry has grown exponentially in the recent past. No longer is industry dominated by “cigar box” operations and simple coin-fed mechanical parking meters (see Appendix D – Parking Systems Technology). Contemporary parking and access control systems use networked computers, radio frequency identification, license plate recognition and other technologies that require skilled and experienced IT professionals to make work.

Second, UHM may not possess adequate alternative resources needed to reduce on-campus travel demand. Transportation Demand Management (TDM) is a term applied to a broad range of strategies that are primarily intended to reduce and reshape demand (use) of the transportation system. For a university, TDM measure can reduce or delay the need for construction of costly parking facilities and it has been shown that students are especially receptive to considering and using alternatives to driving alone.

Some TDM measures have been in use for years, such as the promotion of carpooling, which began during World War II. Broader implementation of TDM began during the 1970s and 1980s, often stimulated by problems related to our heavy reliance on foreign energy sources. More recently, increasing congestion, decreasing state and federal transportation funding, and concerns over related issues such as air quality have resulted in increasing attention to TDM as an alternative to building more roads and highways.

Third, UHM Parking Operations appears to lack sufficient communications and marketing resources to effectively communicate with the broader campus community and influence the behavior of students, faculty and staff. As with any successful business enterprise, robust and two-way communication between the business and its constituents is necessary to improve service delivery and make certain that the business continues to be relevant to the customer. Parking organizations have traditionally done a poor job of marketing and communicating but recently progressive organizations have seen the value of marketing their services and proactively communicating with their customers.

### Recommendation 4: Evaluate internal human resources in the areas of IT, alternative transportation and marketing and communications to determine what benefits would arise from adding additional capacity in these areas.

Organizational structure analysis is but one way to compare UHM with its peers. Another way is to consider operating costs per stall and per enrolled student (as a proxy for all constituents given the assumption that number of faculty and staff is a function of enrollment).

Chart 4 shows the operating costs per parking space for UHM and its peers. For this statistic, UHM’s operating expenses per parking stall ($941) are 48% higher than the average of $659 and the highest among the selected peer group. Since its labor costs are low, the higher than
average per stall operating cost must come from some other source. We note two potential areas worthy of further review: utilities and the Ceded Land Payment. While UHM has nearly 1,700 fewer parking spaces and a smaller office than CU, its budgeted utility costs are 112% higher for FY10 than CU’s.

**Chart 4: Operating Expenses (in dollars) per Parking Space**

Chart 5 represents operating expenses as a function of enrollment. Here UHM is 13% above the peer average of $231 per student at $262. Further analysis to include faculty and staff to the constituent number along with incorporation of various mode splits for each institution will provide a more accurate number and better comparison. However, it is anticipated that UHM will still be above average in terms of operating costs per constituent just as it is above average with respect to operating expenses per parking spaces.

**Chart 5: Operating Expenses (in dollars) per Enrolled Student**
Recommendation 5: Further evaluate utility expenses and determine viable ways in which utility expenses can be reduced. Consider the impact of Ceded Land payments on Parking Operations’ financial position and whether this expense can be absorbed by another entity at UHM other than Parking Operations.

Fee Adequacy and Major Repair and Replacement Projects and Future Needs

The current fee structure provides Parking Operations with increases for fiscal years 2010 and 2011. The fee increases will provide an additional $1.3 million in annual revenue. During this same period expenses are anticipated to increase by $600,000 due to deferred maintenance projects. This will leave Parking Operations with $700,000 in additional revenues to cover major repair and replacement projects. After FY 2011, expenses are projected to increase at an annual rate of 4%. By FY 2016, Parking Operations will need all of the increased revenue to cover operating expenses.

Parking Operations has identified $6.3 million in repair and maintenance projects between FY 2010 and FY 2014. The projects include repaving of existing parking lots, renovation of the campus entry kiosks, and life safety and structural repairs to the campus parking structures. Based on our evaluation of these projects, each is critical to the long term operation of Parking Operations. The walk through of the campus parking structures revealed areas of structural and maintenance concerns that needs to be addressed. Photographic examples of these issues are attached in Appendix C. These additional maintenance needs will increase the amount of funds required. It is recommended that Parking Operations fund a full structural study of all the parking structures by a structural engineering firm to completely identify and update all of the structural and maintenance needs.

Recommendation 6: Update the most recent structural analysis of parking facilities at UHM by a qualified structural engineering firm with specific parking structure experience.

Based on the current fee structure, Parking Operations will not have the needed funds to complete any projects past FY 2010. Bonding the maintenance projects without a fee increase is not a viable solution as it will increase the overall cost of the projects and Parking Operations will not have the annual revenue to repay the annual debt payments.

The fee schedule that has been proposed by Parking Operations would increase parking rates through FY 2014 and allow for the completion of current maintenance projects on a cash basis and provide for the ability to pay the annual debt service on a $6 million bond. This level of bonding will not support the construction of any new parking facility greater than 200 spaces, but could allow for the consolidation of major structural repairs to the existing facilities.
The 2007 Parking Supply/Demand Study outlined a need to construct 1,539 parking spaces to offset the future loss of parking. Based on an average of $30,000 per stall, this facility would cost $46 million to construct. Based on a 6% annual interest rate, the annual debt service payment would be $3.9 million for 20 years if the entire project is debt funded. The annual permit rate would need to increase by $300 annually in order to pay the annual debt payment. This increase in permit prices does not include the loss in revenue from the existing surface spaces being lost to construction. In order to minimize the need to increase permit prices by this degree, Parking Operations needs the ability to raise permit prices sufficiently to generate additional fund balances that can be applied to this new parking in order to buy down the total debt costs. For every $1 million reduction in debt financing, Parking Operations will save $85,000 in annual interest payments or $1.7 million over the course of the bond.

**Recommendation 7:** Develop financial plan to build capacity for needed parking structure and eliminate deferred maintenance of existing parking facilities.

**FACILITIES**

**Industry Standards and Peers**

*Entry kiosks* - We found the entry kiosk to be functional and of adequate size to accommodate the needs of parking attendants and travelers to campus. However, they are in good repair. Compared to its peers, the entry kiosks are soundly construction and well designed. Similar to Colorado’s, UHM’s kiosks are too small and do not comply with the American’s with Disabilities Act.
Visitor Parking Facilities Kiosks at the University of Colorado

Parking structures and surface lots – Portions of the UHM parking structure and lot system are in fair shape compared to its peers. Generally though, as we have noted, the degree of deferred maintenance for UHM parking structures and surface parking lots has created a serious condition that must be addressed aggressively. Among peer institutions, the degradation that has occurred is most severe at UHM. This is certainly not meant to criticize Parking Operations leadership. Instead, it appears to us that not enough resources have been allowed to be put toward needed preventative maintenance in order to remedy this situation.

UHM Surface Parking Lot in Poor Condition
We note too that we saw much in the way of cosmetic disrepair, much of what we observed hints at the potential for more serious structural issues beneath the surface.
Bicycle, moped, motorcycle lots – UHM appears to be making good use of space for motorcycle and moped parking. We note a good dispersion around campus of these facilities and they appear well used.

As with many of the auto parking lots, there are motorcycle facilities in need of re-surfacing and/or chip sealing. Bicycle parking is also well dispersed throughout campus and there are both lockers and racks available to meet the needs of cyclists.
Compared to its peers, UHM has done better than most in terms of accommodating motorcycle, moped and bicycle parking needs. The dispersion appears to minimize pedestrian/cycle conflicts that are present at Colorado and Wisconsin and more accommodations appear available than Cal Poly San Luis Obispo, Boise State and UC Santa Barbara. However, the condition of bicycle racks at UHM can and should be improved.

Bike Parking at UHM

There is an array of old-style bike parking facilities at UHM and nearly all we observed were of the “wheel-bender” style not preferred by cyclists today. This type is so named because a bicycle wheel will bend if pressure is applied to the bike. These racks are commonly found at
UHM peer institutions but some like Colorado have made an effort to standardize their racks. We would suggest UHM consider standardizing and updating their bike racks. See Appendix F – Bike Standards and Planning for additional information.

Bike Parking at UHM

Bike Parking at the University of Colorado
Bike Parking at the University of Wisconsin

Recommendation 8: Standardize parking racks and lockers and develop standards for the placement and amount of parking required on campus.

Parking and traffic signage

UHM is not alone among its peers needing to update campus parking and traffic signage. Comprehensive vehicular and pedestrian way-finding systems are the exception rather than the rule at most U.S. universities. And like most campuses, signage is actually a compilation of signs added together over time as operational conditions change and new systems are introduced. This typically results in more information being presented than can be understood by the user.
Effective parking signage and way-finding systems should be comprehensive in that each element, whether indented for the pedestrian or for the driver, should offer a cohesive and near-complete guidance system from origin to destination. Color schemes should add to the intuitive quality of the system and should convey information as does the text that is included on signage. The number of words should be kept to a minimum recognizing that people will only read a finite amount. The relative speed of the reader is important to consider when determining the appropriate length of the message. Effective billboards, for example, typically limit the number of words used to seven or fewer. This is because a reader cannot read very many words traveling at a high rate of speed. Vehicular signage must be constructed with the traveling speed of the reader in mind and symbols can often be used in place of words to convey the same message. Scale is also an important consideration. Standard signage for vehicles is seven feet. But this scale may not work best for a pedestrian. We recommend consultation with a way-finding expert to help UHM devise a comprehensive and effective signage program for drivers, parkers, bicyclists, and pedestrians. See Appendix G – Sample Sign Plan.
Coordinated Parking Signage at the University of British Columbia

| Recommendation 9: Standardize campus transportation signage after consultation with a way-finding expert and development of a comprehensive signage plan for UHM. |

**Maintenance Procedures**

Parking Operations has done an excellent job maintaining their assets given the overall percentage of their budget that has been dedicated to this process. The image of the campus for customers as they enter the parking areas is one of care and pride. Parking Operations has
dedicated time and resources in updating campus signage to convey a clear and consistent message to all users. Design standards have been completed to ensure all future signs are consistent with those currently on the campus. Parking lot inspection forms have been created to evaluate the condition of surfaces and striping. By assessing the overall condition of the parking areas, Parking Operations is better able to spend its limited resources and generate a greater return on their investment.

Facility Condition

The overall condition of the facilities under Parking Operations Management is fair. There are several parking lots that are in need of mid lifespan maintenance such as seal coating and also parking lots that are in need of resurfacing. Parking Operations has identified $800,000 over the next four years to address these issues. If this maintenance is not completed, the total cost could more than double. The condition of the parking structures on the campus is the area that needs to be addressed in the very near term. Deferred maintenance of the waterproof membrane is allowing water to penetrate into the concrete. This repeated exposure to moisture will facilitate the creation of rust which will significantly increase future maintenance and repair costs. There are also cases of delaminated and spalling concrete in both the Lower campus and Dole Street parking structures. Examples of the deferred maintenance photos are included in Appendix C.

Repair and Maintenance Schedule

Parking Operations has outlined a five year $6 million repair and maintenance schedule. The repairs range from parking lot paving striping to kiosk renovation and parking structure repair. Based on the review of facilities, the highest priority for repairs and maintenance should be directed to the parking structures. Parking Operations has recognized this need by dedicating over 60% of the repair money to the structures. In addition to the repairs outlined in the repair and maintenance schedule, it is recommended that a structural engineer be brought in to update the condition assessment of the parking structures in order to obtain an accurate listing of repair and maintenance needs as well as updated costs and priorities.

A plan has been in place to renovate the kiosks that serve as entry points into the campus for vehicles. These facilities are the first point of contact for employees, students, and visitors. The condition of these facilities is critical in that they can be a person’s first impression of the University. The current facilities are functional but they are in need of extensive repair. The facilities do not accommodate employees with disabilities nor do they allow for an efficient transaction with a customer. Renovating these facilities would allow for the functional issue to be addressed while enhancing the appearance to the campus gateways. The renovation would also allow for the introduction of technologies for the access of vehicles and visitor parking payments that could reduce future operating costs, while enhancing revenue.
Capital Needs

Based on the analysis conducted in the 2007 Parking Supply/Demand Study, UHM currently has a deficit of 178 spaces. The utilization of the upper and lower campus is effectively at 100%, or between 10-15% higher than is recommended. Given this condition, Parking Operations cannot continue their current permit program practices if significant parking spaces are lost. To meet the parking needs of the campus, there would need to be a reduction in the number of parking permits sold or visitor spaces made available on a daily basis.

If the goal of the University is to maintain its current parking supply then it is critical that new parking is constructed prior to the loss of parking due to a construction project. By having new parking in place, employees and students may be relocated once construction starts and Parking Operations will not be subject to a loss of revenue. This practice will allow for a more stable pricing structure in future years and will create goodwill for employees and students who will not have their campus access disrupted each time a new construction project removes parking. The challenge with this practice is to coordinate the timing of the new parking and the loss of existing parking. If a new building project is delayed and parking spaces are not lost, Parking Operations would have excess inventory for a period of time. There is potential that this inventory could be sold to new users on a temporary basis.

OPERATIONAL ISSUES

Peer Institution Funding

Comparison of revenue composition to that of peer institutions has limited value. An “apples to apples” comparison is difficult due to differing reporting conventions from institution to institution. For example, some costs appear in different expense lines and many budget lines are aggregated to the point where comparisons are not possible. In addition, the contribution of individual revenue categories to overall revenues is not something for which there are necessarily industry norms. Operating context is key, as is the management strategy adopted by the campus. At best, a peer comparison of revenues can indicate an area that merits exploration versus local or strategically similar organizations.

A review of major revenue categories revealed only one area that was materially different from peer institutions, meriting further study. UHM parking fines contributed just 7% to parking revenues as compared to 12-14% for peer organizations. It is recommended that UHM further probe this difference by assessing both citation capture rate and UHM fine levels as compared to municipal fine levels.
Peer Institution Funding for Repair and Maintenance

Parking Operations has done a very good job of maintaining their assets to both support operational needs and maintain a positive customer image. Parking Operations currently dedicates 5% of their non-salary operating expenses to repairs and maintenance. The peer universities reviewed had a range of annual repair and maintenance expenses between 5% and 15%, with a normal industry average of 10%-15%. The differences in annual expenses can be associated with the unique makeup of each campus. The University of Wisconsin has 17 parking structures with millions of dollars of deferred maintenance that they are attempting to mitigate, while the University of Arizona has only eight parking structures all less than 30 years old with a climate that is favorable to minimize maintenance.

The goal of maintenance and repair is to extend the useful life of any asset. Preventive maintenance is the least expensive method of prolonging an asset’s life. The cost of deferred maintenance can be exponentially more expensive and have a larger and longer disruption on the ultimate customer. Based on the review of the assets of Parking Operations, the 5% annual maintenance budget is not sufficient to meet the needs of an aging asset supply. The parking structures have the largest amount of deferred maintenance with the surface parking lots close behind. The $6.3 million in repair and maintenance expenses projected over the next five years may not be enough to meet the current deferred maintenance needs. Based on this, it is recommended that Parking Operations increase their annual maintenance and repair budget to at least 10% of annual operating costs.

UHM Parking Operations Revenues and Expenses

The revenues and expenses for Parking Operations have been increasing over the last 5 years. During this period, revenues have increased by 18% while expenses have increased by over 28%. The reduction in annual debt service payments during this time has allowed Parking Operations to minimize the negative impact to their fund balance. The increase in revenues has been from sources other than permit and visitor income. The increases in these areas have been 1.3% and 6.4%, respectively. Most of the additional revenue has come from an increase in commissions. With the exception of a large increase in student payroll, expenses have all increased close to the same rate over this time period. The 5% increase in annual expenses is reasonable, provided that revenues can keep pace supporting the services provided. Without an increase in revenues to support the expenses, Parking Operations will be forced to cut programs in the future. Continuing to defer maintenance expenses will not provide for the needed monies to maintain current operations.

In comparing the revenues received by Parking Operations to those of their peers, the only outlier is permit revenue. The peer institutions receive on average 52% of the annual revenue from annual permit sales, while UHM only receives 40%. Only the University of Colorado received a lower percentage of their revenue from permits then UHM. Colorado obtained a
larger portion of its annual revenue from visitor parking and fines. In reviewing the expenses, UHM had a much lower percentage of personnel costs then the peer average (28% to 42.8%). Much of this difference can be explained by the large number of services contracted out by UHM. The operational expenses are higher than the peer average due to this same outsourcing. The percentage of debt as a percentage of overall annual expenses, excluding transfers, is only 10% for UHM. The average of the peer institutions is 22.4% with the range from 18% to 40%. Parking Operations has the ability to incur more annual debt provided their permit and visitor rates are increased to support this annual expenditure.

Policy and Procedure Review

Parking Permit Procedures

In June of 2009 UHM Parking Operations converted to T2 System’s permit and enforcement management system known as Flex. T2 Flex is a thin client application, meaning all data and software resides on secure servers in one location. Each client (PC) accesses the data and functionality via the Web browser so you work securely from any PC with Internet access.

This change required adaptation and business rule modification on the part of Parking Operations. Parking Operations was also provided with a User Guide from T2 that was reviewed by the peer team.

The following recommendations are made based on the peer team’s experience with T2 and Flex. These recommendations will improve the efficiency of Flex and help maximize its effectiveness.

Recommendation 10: Participate in T2-sponsored webinars, User Group meetings and seminars aimed at increasing Parking Operations' skill in using Flex.

Recommendation 11: Hold periodic and structured meetings with T2 staff to provide input on product functionality and innovation.

Recommendation 12: Build strong Flex knowledge and skill within the UHM IT staff. As a relational data base with significant but sophisticated output capability, maximization of the system requires experience on the part of organic IT personnel.

Recommendation 13: Cross-train as many members of the Parking Operations staff in the use and operation of Flex as possible. This will improve system performance and departmental effectiveness over the long run.
Parking Enforcement

The enforcement program for UHM was reviewed by the peer team. Standard operating procedures for citation issuance, enforcement patrolling, citation collections, appeals, billing, booting, towing were reviewed. Generally, the procedures used by UHM appear complete, consistent with best practices of peer institutions and consistent with laws applicable to UHM with respect to parking management. We do note the following areas where further review and program refinement might be appropriate at UHM.

- Citation amounts do not appear to have significantly changed since 1993. It is recommended that Parking Operations conduct a market analysis of citation amounts in the Honolulu area to determine if UHM citation amounts are consistent with other entities in what amounts are charged for citations. While the full fine schedule for Honolulu was not available, the Honolulu Police Department did indicate in a telephone conversation that the fee for parking at an expired meter is currently $35. At UHM, the similar violation brings a fine of $15 (failure to pay visitor fee).
- We question the $25 fine amount for use of illegal or counterfeit permits. Using a counterfeit permit is a theft of services and would be discouraged with a higher fine amount.
- Parking Operations may wish to investigate the use of license plate recognition (LPR) for parking enforcement as a means of reducing costs and extending the reach of enforcement personnel. The University of Colorado has recently and successfully completed a pilot program using LPR. LPR not only proved successful in enforcing time-limited parking zones but also allowed for the license plate to be used as the parking credential student parkers thus replacing the traditional hanging tag. Additionally, LPR was able to collect lot utilization information while also performing enforcement duties.

Recommendation 14: Review citation amounts and compare against those of the local market.
Recommendation 15: Consider adjusting the fine for theft-of-service type violations.
Recommendation 16: Consider use of License Plate Recognition for enforcement, permit management and lot utilization data collection.

Special/Athletic Events

Special events at UHM are managed in a similar manner as those of other institutions for which we have experience. Parking Operations has gone the extra step in pre-defining traffic routes, cone patterns and other needed traffic control so that as little time in preparation is needed. A pricing scheme is used so that Parking Operations is reimbursed for their expenses and it appears that there is little “free” special event parking provided – either the sponsoring department pays Parking Operations for parking or attendees themselves do. It also appears
that little or no field concessions occur at UHM. This we favor in order to reduce the need for field revenue control. This approach generally speeds ingress and improves customer service.

Our chief concern is how parking revenues are distributed primarily for athletic events. It is our opinion that athletic events should not be considered differently than any other parking need on campus and that any excess revenue after expenses should go to Parking Operations. We often hear the argument that the athletics department should be allowed to keep excess revenue because the athletic event is what creates the need for parking in the first place. But academic activities could easily be seen in this same way.

Instead, we favor an approach that allows Parking Operations to capture any and all revenues from all parking activities. This eliminates special (and inappropriate) consideration for certain departments and campus units over others and allows for revenue generation to address the various and important issues associated with managing parking facilities and services.

The following analysis was completed for the FY09 season showing parking revenues and expenses for major athletic events.

Table 6: FY09 Major Athletic Event Revenue and Expense Analysis

<table>
<thead>
<tr>
<th>2008-2009</th>
<th>WOMENS VOLLEYBALL</th>
<th>MENS BASKETBALL</th>
<th>WOMENS BASKETBALL</th>
<th>MENS VOLLEYBALL</th>
<th>BASEBALL</th>
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<tbody>
<tr>
<td>NO. OF EVENTS</td>
<td>24</td>
<td>23</td>
<td>18</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>GATE RECEIPTS</td>
<td>$81,232</td>
<td>$60,137</td>
<td>$6,444</td>
<td>$28,488</td>
<td>$49,792</td>
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<tr>
<td>PASS REVENUE</td>
<td>$60,400</td>
<td>$60,081</td>
<td>$7,344</td>
<td>$23,086</td>
<td>$21,672</td>
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<td>REVENUE TOTAL</td>
<td>$141,632</td>
<td>$120,218</td>
<td>$13,788</td>
<td>$51,574</td>
<td>$71,464</td>
</tr>
<tr>
<td>MANPOWER/EQUIP. EXPENSES TOTAL</td>
<td>$98,387</td>
<td>$89,115</td>
<td>$10,446</td>
<td>$40,292</td>
<td>$45,704</td>
</tr>
<tr>
<td>NET COLLECTIONS BY SPORT</td>
<td>$43,245</td>
<td>$31,104</td>
<td>$3,342</td>
<td>$11,282</td>
<td>$25,760</td>
</tr>
<tr>
<td>TOTAL NET COLLECTIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$114,733</td>
</tr>
</tbody>
</table>

Recommendation 17: Consider how parking charges assessed and the appropriateness of current practices for distributing parking revenues.

Our second concern relates to the use of contracted enforcement officers to provide traffic control. Unless the event consumes the entirety of the campus parking inventory – such as may be the case for with the L.A. Lakers basketball game – enforcement is needed in other parts of campus. If enforcement staff is redirected to traffic control, the enforcement of parking regulations may suffer during special events.

Recommendation 18: Evaluate the use of contracted enforcement staff to support special event traffic control.
Collection of Daily Parking Fees

The timing of our site visit did not allow us to observe the collection of daily parking fees either at entry kiosks or from multi-space meters on campus. However, we offer the following as best practices to ensure adequate revenue control of fees collected in the field.

- At entry kiosks, revenue control equipment should be used so that revenue collected can be verified independently via the back-office reporting systems that are sold with such equipment.
- Closed-circuit television systems should be installed in each kiosk to record parking transactions as well as provide an added measure of safety for the parking attendant.
- Any cash from cashiered functions should be periodically deposited into an on-site drop safe or removed from the kiosk in a secure manner (contracted armored car, two-person custody, etc.)
- For multi-space meters we recommend a two-person custody system with appropriate key control policies and procedures. Those with access to the non-cash vault should not have access to the cash vault as well. Collectors must have possession of keys to the cash vault while they are doing their rounds. However, when the collector is not conducting a collection the keys should not be in their possession and should be under strict control.
- Consider the frequency of meter collections as a means of reducing the potential of theft. Those meters that are emptied more frequently present less risk than meters that are constantly full.
- Limit the number of meters that can be opened by one key. One-key systems are highly vulnerable to professional meter theft operations.
- Consider installing changeable lock combinations and change the combination frequently.

Recommendation 19: Review revenue control practices to ensure that the collection of fees is consistent with industry best practices.

Organization/Structure/Job Function Review

We have previously noted issues relating to the Parking Operations organizational structure and three major disciplines that Parking Operations may need to invest more heavily (IT, Alternative Transportation, Marketing/Communications). We will focus here on two other major issues relating to organization and job functions.

First, we preface our comments by noting that our impression is highly favorable regarding the Parking Operations staff. Each person we met seemed genuinely dedicated to their work, Parking Operations and UHM. Staff members were professional, approachable, and
represented their department and UHM well. Our two concerns related to succession planning for the eventual departure of the Parking Operations Manager and oversight of the Parking Office located in the Queen Lili‘uokalani Center for Student Services.

Succession Planning

There does not appear to be a natural successor for Manager Shito and given UHM’s relative isolation, retaining as capable and skilled director as Manager Shito will likely be a major challenge for UHM. One logical approach to begin the process of grooming a successor would be to promote one of the two “associate” positions and adjust the duties to add responsibilities and a degree of additional authority. These duties would be removed from the Parking Operations Manager. It may also be helpful to relocate this associate director to the same office location as the Parking Operations Manager. The benefit of this would be to provide additional time with the Parking Operations Manager in preparation for assuming the role when that becomes necessary.

While a significant investment, we recommend that Parking Operations consider having one or more associates apply for and complete the Certified Administrator for Public Parking program offered by the International Parking Institute (IPI). See Appendix E – Professional Development for additional information about CAPP, training sessions offered by IPI and other professional development resources.

Recommendation 20: Consider promoting one current “associate” manager and relocating them to the Parking Operations Manager office.

Recommendation 21: Consider sending associate Manager level staff to CAPP.

Parking Office Oversight – Our brief period of observation at the Parking Office revealed an area of concern regarding the role of the “associate” manager assigned to that location. It appeared to us that far too many questions from front-line staff were being directed to the associate than was appropriate. Perhaps this indicates a lack of empowerment on the part of front-line staff that should otherwise be able to deal with the majority of the issues we observed. Instead, front-line staff appeared overly dependent upon their supervisor.

Similar to the succession planning recommendation, we believe relocating the associate to the same office as the Parking Operations Manager may increase the independence of the front-line staff at the Center for Student Services.

Recommendation 22: Evaluate Student Services operation and consider relocating senior staff member to improve self-sufficiency of existing front-line staff.
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Appendices

Appendix A – Peer Team Bios

**Cindy Campbell**
Ms. Campbell is the Associate Director of the University Police Department in San Luis Obispo, California. With a combined 30 years of experience in law enforcement and Parking & Transportation Services, Ms. Campbell has established herself as a leader within the parking and transportation industry. She applies her knowledge and experience in parking and circulation planning, parking program management, enforcement, adjudication, crisis communications and conflict resolution to develop and implement programs to enhance customer satisfaction and increase program revenues.

In addition to parking program responsibilities, Ms. Campbell has oversight of the University Visitor Center, the 9-1-1 Emergency Communications Center, Transportation Demand Management & Transit Programs, Events Planning & Management Services, Crime Prevention and Community Outreach Programs, and Business Services for the University Police Department. Ms. Campbell currently serves as Chairman of the Board of Directors for IPI.

**Casey Jones, CAPP**
Mr. Jones is the Director of Transportation & Parking Services at Boise State University (BSU). Prior to joining BSU in June of 2010, Mr. Jones served as Director of the award-winning Parking & Transportation Services at the University of Colorado at Boulder (CU) from 2006 to 2010. He managed off-street parking for the City of Portland, Oregon before joining CU. He has worked in the areas of economic and community development, public safety and intergovernmental relations. Jones is the chair-elect for the IPI, founding president of the Pacific Intermountain Parking and Transportation Association, he has chaired the IPI state and regional associations committee and the IPI strategic planning committee focused on building relationships with organizations impacted by transportation and parking issues. Jones co-founded the IPI Road Runners Club in 2008 and was awarded the IPI Chairman’s award that same year. He holds a Master’s Degree in Public Administration, a Bachelor of Arts in Political Science from the University of Maryland, and he is a Certified Main Street Manager through the National Trust for Historic Preservation.

Jones is a board member for the Rocky Mountain chapter of the Association for Commuter Transportation, a member of the American Planning Association, the Midwest Campus Parking Association and he served on his community’s transportation advisory council.

**Patrick Kass, CAPP**
Patrick Kass’ career at the University of Wisconsin – Madison began in February 2008. Prior to arriving at Wisconsin, Kass was the director of Parking & Transportation Services at the University of Arizona for nine years. Kass’ began his career at the University of Kentucky where he spent thirteen years working in
their Parking and Transportation Services department starting as a part-time student employee and working his way up to Associate Director.

Kass received his Bachelors of Business Administration in Finance and Marketing in 1991. In 2005 he earned his Master of Administration with a Certificate in Public Administration from Northern Arizona University. Kass also earned his Certified Administrator of Public Parking from the International Parking Institute and the University of Virginia in 2001.

Kass currently serves on the Board of Advisors for the International Parking Association with committee assignments for the professional certification review and curriculum. He is also the Vice President of the Midwest Campus Parking Association. In 2003, Kass helped form the Southwest Parking Association and served on the board for four years.

Kass’ career focus has been on enhancing customer service, program accountability and equity, financial stability, and enhancing the role of the department to meet the needs of the campus community. He has presented at professional conferences throughout his career on topics ranging from managing traffic speeds within parking facilities to developing a comprehensive campus signage program.

**Josh Kavanagh, CAPP**

Joshua Kavanagh is the Director of Transportation Services for the University of Washington where he oversees six programs, including Commuter Services, UW Shuttles, Fleet Services, the Transportation Improvement Program, Recycling & Solid Waste, and Moving & Surplus. The University of Washington’s U-PASS, an offering of Commuter Services, has become the national model for campus transportation demand management programs since its inception 18 years ago. Under the U-PASS banner, Washington developed a unique model of deeply integrating commuter benefits for multiple transportation modes emphasizing daily consumer choice and using market forces to guide those choices. A reformed campus parking scofflaw, Kavanagh has built a career in the higher education transportation market, with a specific focus on transforming organizations with regulatory and supply-side orientations to business auxiliaries that focus on demand-side issues and satisfying customers’ core needs.

In addition to his work at the University of Washington, Kavanagh is a national leader in the parking and transportation demand management communities, serving on the board of directors for the Association for Commuter Transportation, as a member of the International Parking Institute’s Advisory Council and Education Committee Co-Chair, and as the Vice-President of the Pacific Intermountain Parking and Transportation Association.
Appendix B – Documents Reviewed

Ampco Gate Operation
Auxiliary Services Emergency Support Plan for Campus Emergencies and Natural Disasters, May 2009
Civic Center Parking Memoranda
Daily Office Procedures, Parking Operations
Emergency Procedures for UH Mānoa Maintenance
Freeman Manpower Requirements
General Office Information, Parking Operations
Graduation Checksheets
Long Range Development Plan University of Hawai‘i, Mānoa Campus 2007 Update, Group 70
Lot Evaluations for Striping 2008
Lot Inspection Form
Maintenance Schedule/Locations (Permalloy Fall 2006)
New Parking Rates Effective July 1, 2009
Schedule of Unrestricted Revenues, Expenses and Other Changes FY2005-FY2009
Parking Routine Responsibilities Over the Course of the Calendar Year, Parking Operations
Procedures for Faculty/Staff Bus Pass Pilot Program
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School of Medicine Parking Services
Sign Inventory UH Parking Maintenance, 2008
Special Events Manual, Parking Operations
Special Parking Passes, July 2, 2002, Parking Operations
Suggested Sign Specifications
T2 Flex Day to Day Procedures (various), T2
University of Hawai‘i at Mānoa Parking Operations Standard Operating Procedures. 2010
University of Hawai‘i STAR User Policy and Security Agreement
Appendix C – Additional UHM Photos
Parking Operations Program Review

July 2010

University of Hawai‘i Mānoa
Parking Systems Technologies

- Advanced Parking systems
- Parking Guidance Systems
  - Basic of Parking Guidance Systems
  - Benefits of APS/PGS
  - Examples of PGS in Urban (or Downtown) Areas
    - In US
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    - In ASIA
- Guidance within Parking Lots
- Parking Information via Phone and Internet
- Automated Parking Systems
- Advanced Payment Systems
- Advanced Parking Meters
- References

ADVANCED PARKING SYSTEMS (APS)

Advanced Parking Systems obtain information about available parking spaces, process it and then present it to drivers by means of variable message signs (VMS). APS is used in two ways: to guide drivers in congested areas to the nearest parking facility with empty parking spaces and to guide drivers within parking facilities to empty spaces. Although the former function is more common, guidance systems within parking lots are becoming more common. This growing number of guidance systems addresses drivers' need for more information about the position and number of the spaces that are actually available within a parking structure. These systems reduce time and fuel otherwise wasted while searching for empty spaces and helps the car park operate more efficiently.

The need for APS is most prominent in highly dense areas, where the search for parking facilities congests and interrupts traffic flows. While European cities have shown the most interest in APS, having implemented it since the late 1970’s, American cities have only begun testing APS in the past decade. See our Telecommunications Diagram on Parking Management for more information.

PARKING GUIDANCE SYSTEMS

Basics of Parking Guidance Systems

These systems are based primarily on the use of message signs to give drivers information regarding parking availability. The availability of parking spaces in each facility is obtained from sensors that count the number of cars entering and exiting or, in other cases, by comparing the tickets issued at machines or cash registers to the capacity of the facility. This information is sent to a central or main computer that processes it, determining the locations of available parking. Availability is generally expressed in terms of "full" or "empty," but in
some cases the actual number of spaces is given.

A problem with showing actual numbers is that when the number is small, drivers tend not to enter because they think that all of the spaces will be taken by cars already in the facility. This would not actually happen because the availability takes into account cars that have already entered the facility. The systems include VMS that show parking availability and nearest parking facilities. In some cases static signs guide drivers to the facilities. Other means of providing availability information are via roadside radio terminals, where small static VMS show the frequency at which it is being broadcast; by phone, where automated answering machines can give information on congestion and parking availability; via the Internet, where one of the main services is to provide information and parking reservations; and via in-vehicle navigation systems.

**Benefits of APS/PGS**

- Reduction in time spent and fuel consumed while searching for available parking space.
- Reduction in congestion due to fewer cars driving around searching for spaces.
- Elimination of queues entering parking facilities because drivers will not go to a facility where there is no available space.
- Reduction in illegally parked vehicles.
- Better distribution of flow and parking demand through the area.
- APS systems result in higher revenues and profitability for the parking facilities.

**Examples of PGS**

**In US**

**St. Paul, MN**
The system in St. Paul was designed to improve traffic and ease the search of parking in downtown. It interconnects 10 different parking facilities in the downtown area. A central computer system obtains information from each facility, processes it, and sends it to LED-based VMS. It uses 56 signs to provide information on parking availability. From these, 46 are static signs, used as "wayfinders" to guide drivers to the facilities.

**Pittsburgh**
Pittsburgh has a "wayfinder" system that consists of a series of linked signs that guide drivers not only to parking facilities but also to special attractions in the area. This system divides Pittsburgh into five color-coded areas. Most of the signs are static, but some are dynamic, showing text like "open" or "full" to describe the status of the facility.

**In EUROPE**

**Across Europe**
e-PARKING is a parking management system that relies upon mobile phone technology. It enables drivers to obtain early information on available parking spaces so that they can reserve spots at desired times. e-PARKING will also integrate the currently discrete parking administration systems (i.e. billing applications, parking site occupancy control systems, etc.)
The conveniences of e-PARKING will be achieved through a parking space optimization service (PSOS). The PSOS can:

- check the availability of parking spaces in a given area (i.e. county, city, etc.) or give the parking availability at a certain time of day;
- book a parking place in a given parking lot or area for a certain day/time;
- help drivers find parking lots (via cooperation with guidance systems); and
- interact with other electronic booking services to reserve parking spaces (i.e. near a cinema)

Click for more information on e-PARKING.

**Bristol, UK.**
The Bristol system guides drivers to empty spaces within parking structures. The system includes 3 multistory parking facilities, with a combined total of 2,645 spaces. Infrared vehicle sensors detect empty spaces, and this information is transmitted to a main computer that controls VMS, which in turn show the number of available spaces on each floor and guide drivers to them. The system software has the ability to learn from the data so that it can forecast at what times of day a particular facility will be full and accordingly divert drivers to other facilities.

**Frankfurt am Main, Germany**
Frankfurt was one of the first cities to have installed APS for parking management. In the late 1970’s they implemented the concept of guiding drivers to parking facilities. In 1992 they updated their system. It has three phases: first, guiding drivers to 1 of 5 areas; second, guiding them to a more specific sub-area; finally, guiding them to parking facilities. Guidance is provided by VMS, which display information provided by the parking facilities’ main computer.

**Ghent, Belgium**
The parking guidance system in Ghent is divided into four parts: detection and local processing; central processing; control and checks; and dynamic signs and data transmission. Each facility has a reporting terminal that receives data from sensors and sends it to the central processing unit that processes the data and sends it to the display signs via phone line, cable network, TV signal or radio network. The Ghent systems uses the TV transport network to send the data, and connects car parks with the central processing unit. It also tests the connection and has to make simulation of everyday parking traffic, that is, it makes constant checks on the interconnections between car parks, a central processing unit and TV distribution network, so that if one fails, the program will provide information on parking status based on previous occasions. The signs used to show availability are mainly static with some dynamic.

**Koeln, Germany**
Koeln has a Parking Guidance System as a component of its Urban Traffic Control System. It uses VMS on access roads to provide information on parking availability in park and ride lots.
In ASIA

**Toyota, Japan**
Advanced Parking Information Systems are used to maximize the utilization of parking facilities in this city is of 340,000. Information is provided in six ways:

- Telephone information on traffic congestion, road restrictions and parking availability.
- Using suburban VMS to guide drivers to the three most convenient parking facilities
- By roadside radio
- Downtown VMS guide drivers to the most accessible parking facility where space is available. They also offer en-route congestion.
- Individual Guide Sign direct drivers to a named parking facility
- Entrance signs at parking facilities

**Yokohama, Japan**
This dense city of 3 million has introduced a system that provides drivers with the current status on parking and guides them to parking facilities. It includes 16 parking lots with 4,400 parking spaces.

This project was a joint effort by the government and private parking facility Operators. The system divides the city in four concentric zones. In the first zone, drivers enter the city and are notified of parking availability via detailed information on boards. When entering zone three, a board shows directions to parking facilities. Finally, a board at the entrance displays the name of facility and space availability.

GUIDANCE WITHIN PARKING FACILITIES

Congestion is a problem not only on urban streets, but also inside parking facilities. Therefore, some parking facilities use VMS to guide drivers to empty parking spaces. This requires sensors in each parking space to determine its occupancy status, communications to a central computer that determines how to guide drivers to empty spaces, and communications to the VMS.

**Baltimore, MA**
The "BWI Smart Park" system is an automated parking guidance system intended to make finding a parking space quick and hassle free at the Baltimore/Washington Airport (BWI Expansion). The system is currently available in all spaces in the new Daily A Garage and on Level 2 of the BWI Hourly Garage. Ultrasonic sensors mounted over each parking space monitor the vacancy status of each space and illuminated electronic “way-finding” signs, located at the ends of each parking row, display the number of spaces available in each row. Green arrows direct patrons to lanes with vacant spaces. Red Xs indicate lanes where no spaces are available. Blue lights direct disabled patrons to accessible parking areas. Once fully deployed, electronic signs at both the hourly and daily garage entrance plazas will reflect the status of vacant parking spaces on each level. Take a virtual tour of the Smart Park at
**Humphrey Terminal Parking Ramp Phase I at the Minneapolis/St. Paul International Airport**

Since August 2002, phase 1 of this parking facility has offered wayfinding signage and real-time parking status information to parking lot users. This facility uses overhead LED signs to inform drivers of which levels are available in the structure; the message "CLOSED" appears when a level is reaching capacity. Parking status is provided at two advanced locations and at the entrance to each parking choice. This parking facility also features pedestrian orientation and directions to crosswalks and elevators on each level, as well as memory retentive devices to help drivers remember where they parked (i.e. a sign might read "REMEMBER YOUR LEVEL: HUMPHREY RAMP/LEVEL 2").

**Houston International Airport**

This advanced parking facility has a computerized system that uses wires embedded in the garage floor to act as sensors when cars enter and exit each level. The data obtained is sent to a main computer, which analyzes it and calculates the number of spaces available. This system controls 19 entry gates and 22 exit gates. Large information boards at each entrance and red and green lights at each space indicate the availability of parking. 47 signs provide information regarding availability on each floor.

**Toulouse, France**

A new multistory parking garage was constructed at the Blagnac Airport near Toulouse, France. Ultrasonic sensors monitor individual parking spaces and indicate occupancy status via green (vacant space) or red (occupied space) lights. A system of LED signs placed at each junction in the garage flash arrows that indicate to drivers which way they should drive to find an empty space. The parking garage control center provides a visualization of the whole multistory car park and allows the control center to intervene in the parking space management. Vehicle count information is easily obtained (this includes the number of vehicles and the frequency of parking space occupancy.) A similar system is at work in Turkey at the TEPE NAUTILUS shopping mall in Istanbul.

**PARKING INFORMATION VIA INTERNET AND PHONE**

Phone systems use automated answering machines to assist callers in locating available parking places. In this way, drivers can obtain information on parking availability and directions to parking facilities. Information on parking locations, costs, space reservation, and regulations can be obtained via the Internet.

**Japan**

Parking information has been available on the Internet in Japan since 1998 ([click here for more information](#)). Since December 2000, Internet-enabled mobile phones can also convey parking space information ([click here for more information--in Japanese](#)).
AUTOMATED PARKING SYSTEMS

Automated Parking systems are designed to save space. These systems have mainly been used in Japan. Older systems operate with a rotating wheel with buckets that stores automobiles. These are mechanically simple but not as space efficient as newer systems where automobiles are stored and then moved in four axes (XYZ and rotation).

Fig 1. Example of Automated Parking System (www.robopark.com)

Fig 2. Example of rotation mechanism.

These systems have the added advantage of eliminating the need for the driver to maneuver into and out of a parking space.

New Jersey, USA

A robotic parking system opened at the Hoboken Garden Street Garage in October 2002. This garage, designed for local residents, is seven stories high and accommodates 312 cars. When a driver enters that garage, a sensor detects their access card (similar to an automatic vehicle...
identification card) and signals to the computer that a driver is approaching. The driver proceeds into the open bay, gets out of their car, and pushes a button to instigate the automated parking process. Once the driver has left their vehicle, an integrated motion control system takes over, managing 35 independently operating robots that transport the vehicle from the entrance bay into an open parking space. Here is a detailed description of the automated parking process from *Road Traffic Technology: Industry Projects*:

The central computer system guides a carrier on steel rails along an open aisle-way to a position adjacent to the arrival station and the pallet. An additional rack entry module moves above the upper surface of the carrier and is inserted beneath the pallet; the pallet and the vehicle are then transferred to the carrier. Under the direction of the computer, the carrier (with the pallet and the vehicle inside) is moved from the arrival station to a multilevel lifting device; the pallet and the vehicle are then transferred to the lift. When the lift reaches the designated parking level, the pallet and the vehicle are transferred to another carrier. This carrier transports the pallet and the vehicle to the designated parking slot. Lastly, the pallet and the vehicle are transferred into the parking slot by the rack entry module. This system design enables multiple independent motions simultaneously thus dramatically increasing reliability and speed of transactions.

**Vancouver, British Columbia**
The system used in Vancouver is for a lot of 33 feet wide, which is not sufficient for underground parking. A north Vancouver firm designed and built an electro-mechanical, computer-controlled system.

A description of the system by Douglas Yip (1996):

"After obtaining security clearance to enter the building, the driver is directed to park in a designated area. The parking system monitors the vehicle position via an array of photo-electric sensors and uses a display monitor to provide information to the driver. After the vehicle is successfully parked, the driver and all occupants are directed to exit the parking area. A color graphics touchscreen is used by the driver to interact with the system. Before starting vehicle storage, the parking systems closes the overhead door and secures the area. The vehicle is lowered to the second parking level where it is rotated 180 degrees, translated sideways to the appropriate storage bay and pushed into a storage bay. To retrieve a vehicle, the driver simply selects the vehicle to be retrieved via the touchscreen terminal. The system automatically retrieves the vehicle and presents it ready to drive out."

This system has the following components: pallets and storage bays, lift, turntable, vehicle transport assembly, standby operation, electrical description, motion control, host computer, control logic and an operator interface.

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**ADVANCED PAYMENT SYSTEMS**

One of the major problems of cash-based parking payment systems has been the time spent in queues waiting to obtain a ticket or to pay a cashier. Queues can cause congestion in areas within and outside of parking facilities. Electronic payment can eliminate the need to
stop when getting a ticket or paying. For a description of electronic payment and its different technologies, please go to the Fare Payment Technologies section of the site. Advanced fare payment systems are also used in advanced parking, and one of the most widely used technology is Radio Frequency Identification (RFID).

The use of RFID or Transponders is surging throughout the world because they permit fast and easy access to parking facilities. RFID is a wireless process that recognizes an object by detecting and reading a unique radio-signal. The signal conveys information regarding the user; when it is within five feet of the entrance, the transponder emits a signal that the main computer then verifies. This system permits hands-free, nonstop parking access. People need not loose time searching for money or cards when paying.

One emerging parking payment technology falls under the rubric of m-commerce, which refers to the wireless payment of services (or products) like parking. An m-commerce parking lot allows drivers to use their mobile phones to wirelessly "deposit" money towards time in a parking space and remain updated via SMS messaging on the time remaining. Drivers usually have to register their license plate and credit card number in order to use the wireless metering. These virtual parking systems exist in various stages of development around the world but have made the most progress in Asia and Europe.

**Mobile phones pay for parking in Singapore**
Beginning in 2002, drivers in Singapore have been able to pay their parking lot fees using their mobile phones. This program was launched by Suntec City, one of the largest shopping malls in the city-state. To use their mobile phones as an electronic purse, drivers first register their credit card with Telemoney (a free service that allows users to pay wirelessly for certain products--including taxi fares). Before leaving Suntec City, drivers call Telemoney and enter their parking ticket number and Telemoney PIN into their phone to make the payment.

**M-commerce applied to parking in Vienna, Austria**
In January 2003, Vienna began experimenting with a wireless parking payment system called m-parking. Thus far it has been restricted to 1000 field test participants. Drivers register their mobile phone and license plate as well as their credit card details to sign up for a virtual parking ticket account. When they want to park, the customer sends an SMS (short message service) message with the license number of the car, the location code of the parking area, and the number of minutes they wish to park (i.e. 30, 60, or 90) to a designated number. The customer then receives a confirmation and the parking expiration time via text message. Ten minutes before the customer’s parking time is up, a reminder is sent to their phone, allowing them to return to their vehicle or pay again. The fee subsequently appears on the driver’s phone bill. More information m-parking.

**M-commerce at parking meters in Melbourne, Australia**
Beginning in September 2002, an Australian mobile phone company launched an m-commerce test project for parking meters in Melbourne and Sydney. In Melbourne, the test involves 12 multi-bay parking meters located on both sides of La Trobe Street between William Street and King Street and on the west side of William Street between La Trobe Street and A’Beckett Street. The meters are available in Sydney at Bronte Beach via Waverley Council. Drivers are able to use their cell phones to pay for parking spaces using qualified phones; they can also receive an SMS message in advance of the expiry time that alerts them that 10 minutes remain at their space. A study conducted in the spring of 2003
found mixed responses to the wireless parking meters. While many pilot test participants enjoyed the convenience of not having to worry about carrying correct change, some found the meters difficult to use. Twenty percent of people polled said they were unable to complete the transaction by phone, and others complained that the SMS messages were hard to read because of the small font size. Prospects are good for m-commerce applications like this one, but cell phone display technology might need to become more user-friendly before it is widely accepted. More information on paying for parking using m-commerce.

ADVANCED PARKING METERS

One way to increase public revenue from public parking spaces is by improving the way parking meters gather data. Improved parking meters have evolved that increase car park revenue as well as efficiency in service and operations. It provides parking meters with the capacity to provide real-time information. This information consist primarily of the status of parking spaces (it indicates which expired metered spaces have parked vehicles.) The technology consists of sensors located at meters that report on their condition (i.e. whether it is working or if it is expired). This information is processed by a microprocessor and then sent via an internal wireless modem to the server. This server then processes the information from all the parking meters and sends it to the public institution in charge of them. This system also provides verification of parking permits. For example, disabled people with special license plates can be automatically approved for parking in designated places.

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Authors: Lauren Smith and Hans Roth. Last Updated 07/29/03
Appendix E – Professional Development

International Parking Institute (IPI) www.parking.org

Certified Administrator of Public Parking (CAPP) Certification Course

Nine or more different courses are specifically designed for the certification program and are offered during each two-year period. The instructors and content of these courses are approved and recognized by the University of Virginia. During a given two-year period, two five-day courses and at least seven two-day courses are held in conjunction with IPI annual conferences and educational seminars. Candidates are required to take both of the five-day sessions. At the end of the two-year period, all of the courses will be repeated and updated. These courses are open to every candidate.

The five-day sessions run concurrently with the annual International Parking Conference and Exposition. In even numbered years, they feature management topics. In other years, these sessions focus on industry-specific issues. Although these special certification courses are operated exclusive of most conference activities, candidates also have access to the exhibit hall so they can take advantage of the exposition and meet with exhibitors.

The two-day sessions on industry-specific material cover a wide variety of subjects including design and maintenance facilities, parking safety and security, dealing with the media, enforcement and adjudication, transportation issues, training your employees, the impact of state and federal governments on parking, revenue control and more. These courses are available to anyone interested, but a person must be a candidate in the program for attendance to be assigned a higher point value. Many of these courses are repeated and new subjects are added regularly.

These sessions, along with specific outside reading, are designed to cover the materials to be tested and help candidates identify areas in which they need to increase their knowledge. Courses include materials which become the property of the candidate, and additional materials are available from IPI's library. Furthermore, instructors are available for consultation throughout the program.

Each five-day session has a point value of 20, with a maximum of 40. For certification candidates, the two-day sessions each have a point value of 7.5, for a maximum accumulation of 30 points. Therefore, for candidates, this portion of the program a point value of 70. Combining the maximum scores from the courses and the personal data form gives a total possible score of 142.
On-Site Training

An organization is only as good as it’s employees. In order for an organization to produce professional career-minded employees an investment has to be made. What type of investment must an employer offer each individual employee to gain this? An investment in training and education is a sure payoff.

Do your front-line employees understand the total scope of their job? Are they empowered to make decisions and have vital input to specific changes that effect his or her job? They are often goodwill ambassadors for their departments, yet they are the ones who hold the most "thankless" jobs. Their role and their understanding of their role is the vital key towards their development and their ability to provide excellent customer service.

In developing a professional parking staff, investments have to be made. To invest properly, the employer must provide training as one of the needed tools to get the job done.

A truly developed parking services officer is a major asset to the organization. This person will value the job and the role that he or she has in the organization. This person will come to work on a daily basis, with enthusiasm and the positive attitude to give a full days work for a full days pay. Most parking employees are not aware that the obstacles they face on a daily basis are the same or similar in every parking operation. The sharing of information through training is our most valuable tool to develop our most valuable asset...our employees.

IPI has provided on-site training for more than 5,000 parking employees throughout North America. For more information, contact Lauri Chudoba at chudoba@parking.org or 540-371-7535.

Customer Service
Increasing understanding of the importance of the role of front-line employees in fostering excellent customer service and influencing the perception the public holds of the parking profession.

Team Building
This course focuses on team members’ relationships to each other and the team; team members’ relationship to the organization; team members’ skill in quality, process and productivity improvement.

Conflict Resolution
Training typically focuses on imparting new information and effecting changes in individual skills and
attitudes. Conflict resolutions training, if successful, needs to focus on the particularly challenging area of "attitudes and values."

List Serves

For university and college parking professionals: CPARK-L (http://lists.cac.psu.edu/cgi-bin/wa?SUBED1=CPARK-L&A=1)

For transportation demand management information: Trans-TDM (www.nctr.usf.edu/clearinghouse/connections.htm)