Report to the Downtown Parking Management Group

DATE ISSUED: April 4, 2007

ATTENTION: Downtown Parking Management Group
Agenda of April 5, 2007

SUBJECT: Final Report - Downtown Multi-space Parking Pay Station Pilot Project

SUMMARY
THIS IS AN INFORMATIONAL ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE.

BACKGROUND

A nine-month pilot project was undertaken by the City and Downtown Community Parking District to evaluate multi-space parking meter technology in a production environment and determine its suitability for broader use within the City. This technology has the potential to increase occupancy and turnover of parking spaces, provide more complete and timely information and statistics, increase parking meter revenue, and provide greater flexibility and control of parking meter rates. The technology also provides a broader range of payment options including credit cards and one of many important components necessary to maximize overall parking utilization.

Through a competitive procurement process, Cale was selected as the multi-space parking meter vendor for this pilot project. The City has the option to extend the Cale contract to purchase additional multi-space parking meters for up to four (4) years following the pilot project period.

Before implementation, City staff and key stakeholders identified and selected various criteria to evaluate the success or failure of this pilot project (Attachment 1). Baseline data for existing parking meters at these locations was compiled in preparation for later comparison with data gathered during the pilot project period.

On June 5, 2006, 50 Cale Multi-space Pay Stations were put into service at various Downtown locations within the predetermined pilot project area. The Cale pay stations replaced 309 POM single-head parking meters previously installed at these locations. This milestone marked the completion of the implementation phase of the project and beginning of the evaluation phase.

All multi-space pay stations were installed in a *Pay & Display* mode. In this configuration, customers are provided a printed receipt that must then be displayed on the dash of their car showing proof of payment of the posted parking rate.

During the evaluation phase, interim reports detailing the progress of the project were issued by City staff to the DPMG as follows:

Report Date	Report Period	Date Submitted to DPMG
10/4/2006	06/05/2006-09/05/2006	10/04/2006
01/31/2007	06/05/2006-01/05/2007	02/01/2007

DISCUSSION

The purpose of this final report is to summarize data and provide recommendations related to lessons learned during the Multi-space Parking Pay Station Pilot Project.

COST

Installation, maintenance and collection costs for the new technology were tracked and compared with costs for conventional single-head meters.

Service	Cost per Metered Space[1] ($)		
	Single Head	**Multi-space**	**Difference**
New meter/pay station	$487	$1,260	$773
Installation	$257	$28	-$229
New meter/pay station with installation	$744	$1,288	$544
Removal	$213	$8	-$205
Monthly cost of meter maintenance	$5	$15[2]	$10

ENFORCEMENT

Injury reports, citation issuance and revenue, and enforcement officer time during the pilot project evaluation phase were tracked and compared to prior single head parking meter related data.

Injury reports

No significant injuries were recorded during the project evaluation phase. One minor injury report was filed for a strained calf resulting from jumping up to see a receipt in a taller vehicle. Parking Enforcement Officers (PEOs) also commented that reading pay station receipts on taller vehicle dashes could cause some neck strain.

---

[1] Using the pilot project ratio of 6.20 metered parking spaces per multi-space pay station.
[2] Increase in monthly maintenance costs is attributed to higher costs of supplies, materials and labor costs associated with two hour response time. Supplies and materials comprise 75.8% ($70.55) of the costs; labor accounts for 24.2% ($22.52).

Parking Citations

There was a significant decline in the number of parking citations issued for parking meter related violations in blocks where multi-space pay stations were installed.

Parking Citations	Single Head 6/5/05 – 1/5/06	Multi-space 6/5/06 – 1/5/07	Difference (%)
Number issued	2,984	2,325	-22.1 %
Revenue generated to date[3]	$97,206	$62,802	-35.4 %

Although the data compiled neither supports nor negates the theory, it is possible that the reduction in parking citation issuance results from an increase in compliance. It is reasonable to assume that, without the option to pay by credit card, some customers with limited coins available to "feed" the meter may risk a citation rather than taking the time to obtain sufficient change. With the option to pay by credit card, the same customers may use their credit card and pay the full amount necessary rather than risking a citation. In addition, customers paying by credit card are more likely to pay for the maximum time allowed in case of any unexpected occurrence which could delay the return to their vehicle.

Time per block to enforce

The reduction in parking citation issuance may also be attributable to the additional time and effort necessary to enforce in a *Pay & Display* environment.

Enforcement	Single Head	Multi-space
Estimated PEO time to enforce one block face	30 second	15-20 minutes

 Due to the low number of multi-space pay stations compared to single head meters located in the Downtown area, Parking Enforcement staff did not make widespread changes to their existing enforcement tactics. While doing so may be beneficial in a primarily multi-space *Pay & Display* environment, it is likely that additional enforcement staff and resources will be required to maintain optimum enforcement levels in *Pay & Display* configured zones.

It is clear that more enforcement staff time and resources are required to enforce meter related violations in a *Pay & Display* environment. In single head metered zones, officers remain in their vehicle generally shielded from public contacts. In *Pay & Display* zones, officers must leave their vehicle to walk each block face making them more available to public contacts which can frequently take them away from their enforcement related duties.

---

[3] When comparing revenues from year-to-year it is expected that revenues generated from last year's citations will be greater than corresponding periods in the current year. Maximum revenue collection rates are not experienced until 18-24 months after the citation is issued.

Parking Enforcement staff surveyed several cities that currently use Cale multi-space *Pay & Display* pay stations (Attachment 2). Many of the surveyed cities reported that they experienced similar enforcement issues:

- Incorrectly displaying receipts (upside down, overturned)
- Difficulty viewing receipts on oversized vehicles
- Purchasing a second receipt for additional time immediately after purchasing initial time

Enforcement officers in most of these cities currently walk or bicycle when enforcing multi-space *Pay & Display* beats. During the evaluation phase, City staff used prior single head meter enforcement methods which did not include dedicated walking or bicycle beats to enforce in the pilot project area.

Other enforcement issues

After consultation with the City Attorney's staff, staff discontinued using San Diego Municipal Code (SDMC) Section 86.14, Expired Meter, to cite vehicles parked in *Pay & Display* zones without a receipt displayed. It was determined that a driver is not in violation of this section, in its current form, when the receipt is not properly displayed. However, vehicles are subsequently being cited for violation of SDMC Section 86.09(e), Violation of Signs, as a result of the driver's failure to obey the "Display" requirement of the *Pay & Display* zone signage.

The following additional project related issues contributed to the increased time and effort necessary to enforce in the pilot project area:

- Using pay station receipts in single head metered locations
- Using pay station receipts purchased at one rate in block faces with a different rate

However, these issues result primarily from inconsistencies between the new technology and the current municipal code. City staff has identified ten (10) sections in the Municipal Code for review and is currently drafting changes to those sections to resolve these issues.

OPERATIONS

Data on collection time, equipment reliability, parking meter revenue, parking space usage and turnover, and parking supply was compiled for the multi-space pay stations and compared to similar data from single head parking meters.

Parking meter revenue and equipment reliability

The multi-space pay stations proved more reliable, required fewer collection resources, and produced more revenue than single head meters at the same locations.

Parking Meter/Pay Station	Single Head 6/23/05 – 12/23/05[4]	Multi-space 6/23/06 – 12/23/06[4]	Difference (%)
Collection time per meter	15.5 hours/wk (1 min./meter)	4.2 hours/wk (10 min./meter)	-72.9%
Parking meter malfunctions	147	141	-4.1%
Parking meter revenue	$175,503	$218,368	24.4%

City staff maintained a two (2) hour response time on all multi-space pay station repairs to minimize downtime and its negative impacts. The collection time reported for multi-space pay stations includes the use of two-person teams required for safe collection of multi-space pay station coin vaults. Single-person collection teams are used single head meter collections. During the project five (5) underutilized pay stations were relocated within the pilot project area.

Programming and Reporting Capabilities

Multi-space parking pay stations can be monitored, programmed, and controlled remotely by a central computer. Varying parking rates and time limits and other parking restrictions such as special event parking prohibitions can be changed from the central computer eliminating the need to individually program meters on-site and allowing staff to monitor and control services from a remote location.

Multi-space parking pay stations also accept payment by credit card which encourages the use of public parking on street segments with longer time limits where a large amount of coins would be needed. In addition, pay stations are capable of imposing different parking rates and time limits during different hours or days of the week providing greater flexibility in implementing parking regulations. This feature is currently being employed in the Core Columbia and Marina neighborhoods of the Pilot Area, where parking rates and time limits on Saturdays are different from those on weekdays.

The multi-space parking pay stations store each transaction executed allowing the central computer to create reports and graphical statistics showing revenue, maintenance activities, and alarms. The stored information can be exported in various formats for presentation or subsequent processing. It may also be possible to extract parking occupancy and duration information for street segments making this data available to planners and engineers when evaluating parking related changes and improvements. The pay stations also report malfunctions

---

[4] The period was selected to align multi-space periods with prior year single head meter audits ensuring an accurate comparison of multi-space and single head meter data.

directly on the machine display as well as by transmitting alert/alarm messages to the central computer and maintenance staff ensuring quick repair and minimal downtime.

Parking Occupancy, Duration and Turnover

Initial and final studies were conducted before and after the installation of the multi-space parking pay stations. Summaries of the 'before' and 'after' studies are shown in Attachments 3 and 4. The studies were conducted individually for each block, where multi-space parking pay stations were installed. Depending on where they fall, the individual blocks are grouped under each neighborhood in the Downtown Pilot Area. Attachments 3 and 4 show the parking occupancy, duration and turnover for each individual block. Overall, the results reveal that the average occupancy for each neighborhood, except the Ball Park and Core Columbia, has increased after installation of the multi-space parking pay stations as shown in Attachment 5.

Attachment 6 shows the average occupancies for each neighborhood before and after the installation of the multi-space parking pay stations. Certain East Village blocks (highlighted in Attachment 6) had a remarkable increase in occupancy. However, the increase in these blocks can be attributed to the removal of paid parking in these blocks during the pilot and the implementation of a 4-hour time limit. Since the increase in occupancy at these locations is attributed to factors other than the installation of multi-space parking pay stations, their occupancy values were not considered in determining average occupancies for those particular neighborhoods.

Other locations in Ball Park, Marina 1, and Core Columbia experienced a substantial decrease in parking occupancy. This is attributable to the fact that there were no time limits or parking meters prior to the installation of the multi-space parking pay stations at these locations (highlighted in Attachment 6). Installing parking meters and implementing a parking time limit at these locations could explain the large decrease in occupancy. Similarly, since the decrease of occupancy at these locations is attributed to factors other than the installation of multi-space parking pay stations, their occupancy values were not considered in determining average occupancies for those particular neighborhoods.

Despite adjusting for other factors potentially affecting occupancy levels, Ball Park and Core Columbia still experienced a decrease in average occupancy while other neighborhoods saw an increase. This may be attributed to seasonal variations, which typically affect parking patterns. The multi-space parking pay station pilot period did not cover an entire year. This precluded conducting studies during the same time of the year before and after installation of the multi-space machines. The initial study was conducted in June during warmer temperature and an on-going baseball season, as well as other summer events at the Convention Center and the surrounding area which is visited by tourists during this time of the year. The final study was conducted in January, which likely resulted in seasonal variations in the parking occupancy results.

Parking Supply

A study was conducted to determine the impact on the parking supply resulting from removing parking space markings (parking T's) adjacent to the new technology multi-space parking pay stations. City parking spaces are generally installed with a length of 22-24 feet at single head parking meter locations in order to accommodate most passenger vehicles. Operationally, delineated parking spaces are not required in *Pay & Display* multi-space pay station zones.

The study found that all, but three block faces, had parking T's in place adjacent to the new technology parking pay stations. A field evaluation was conducted on these three block faces and summarized below are the locations and the number of parking spaces with and without parking T's:

Location	Spaces without Parking T's	Spaces with Parking T's
'J' Street (10th Avenue – 11th Avenue) North Side	6	5
2nd Avenue (Island Avenue – 'J' Street) West Side	6	5
'F' Street (Park Boulevard – 13th Street) North Side	7	6

Based on the evaluation of these three blocks, the removal of parking T's would result in an increase in parking supply of approximately 19%. Implementing the *Pay & Display* pay stations on a large scale without delineated spaces or Parking "T"s will result in a significant increase in parking spaces. In addition, marked parking T's require frequent maintenance and their absence may reduce the associated maintenance burden the City currently bears.

However, the fact that removing parking "T"s will eliminate the City's ability to impound vehicles for parking too close and prohibiting other vehicles from exiting a parking space should also be considered. State law requires a vehicle to be parked illegally, in this case across a stall marking, to remove it for blocking another vehicle.

Sidewalk Access and Aesthetics

A single multi-space pay station replaces an average of just over six single head parking meters. This removes obstacles and greatly reduces sidewalk clutter facilitating pedestrian access and movement and improving the overall look of the street. It also provides for opportunities to place landscaping and other street furniture by freeing up space on the sidewalk.

PUBLIC ACCEPTANCE

With the assistance of key stakeholders like the DPMG and CCDC, information was collected to evaluate overall public acceptance of the new technology. The information such as the number of meter service requests and complaints, number of citation appeals, and anecdotal information from businesses and users of downtown parking was compared. In addition, a customer survey was developed to gain public and customer input.

Customer Survey

Customer surveys were developed in two different formats to target specific types of customers (Attachment 7 and 8). One format to survey users of the technology and a second intended to gather input from other stakeholders including downtown residents, businesses, and downtown parking users. Surveys collected user/stakeholder opinions on the convenience, ease of use, advantages, disadvantages, and aesthetics of the new parking pay stations. Users were surveyed on-site at various locations throughout the pilot project area in January 2007. The stakeholder survey was posted on the CCDC website and invitations to participate in the survey were sent via email to identified stakeholders.

Survey Question	Percentage of Positive Responses	
	User	**Stakeholder (online)**
Prefer New to Old?	79%	50%
Signage Adequate?	80%	- -
Signage Clear and Understandable?	92%	- -
Easy to Locate Pay Stations?	89%	- -
Reasonable Distance?	87%	- -
Easy to Use?	82%	- -
Credit Card Option Beneficial?	85%	83%
Improved Overall Look of Street?	70%	69%
Conveniently Located?	- -	64%
Noticed Any Problems? (No)	- -	64%
Benefited from Installation	- -	36%
No. of Respondents	61	36

A complete summary of the survey responses and comments is attached (Attachment 9, 10, and 11). While the user survey responses were more positive than the stakeholder survey responses, the responses from both groups were overwhelmingly favorable. In addition, respondents provided a variety of comments. The most common survey comments received are summarized below:

- Instructions should offer Spanish as an option
- Looks better than single head meters
- Credit card option convenient if you don't have change
- Needs to be implemented citywide
- Doesn't refund your pre-paid debit card for unused amount
- New meters should take dollar bills
- Proximity of pay station is key
- Inconvenient to walk back to car to post ticket
- Need better and more signs pointing to location of meter
- Can be misleading and confusing; people think they can park for free

- Difficult to use
- Hourly rate is too high
- Credit card feature did not work

Number of Complaints and Number of Positive Comments

To date, just two (2) complaints and one (1) contact which included both positive and negative comments have been received specific to the new multi-space pay stations. The following comments pertaining to the new technology were communicated:

- Lack of available parking for residents because of high occupancy levels (*700 block of Kettner Blvd*)
- New meters do not refund unused time on pre-paid parking meter cards
- Multi-space meters are an aesthetic improvement and presumably a cost effective option
- Pay station would not accept coins

Parking Enforcement staff reported receiving the following comments from citizens regarding the multi-space pay stations:

- Cannot locate where to pay
- Signs are inadequate or not visible
- When single-head meter not seen, assume parking is free
- Pay station does not give the maximum time allowed when using a credit card (Maintenance issue)
- New technology is confusing, especially for foreign visitors and tourists
- Pay stations do not always accept all methods of payment (Maintenance issue)

Requests for Appeal

Thirty-four appeal requests for citations associated with multi-space pay stations have been received to date.

Parking Citation Appeals	No. Requested	No. Upheld	No. Dismissed
Appeals	34	31	3
Administrative Hearings	9	2	3
Court Hearings	0	0	0

The 0.03 % rate of dismissal for the multi-space pay station related citations is significantly lower than the 1.9% average parking citation dismissal rate calculated for all citations issued during Fiscal Year 2006.

OTHER ISSUES

Other key issues impacting or resulting from this project which have been identified and either resolved or remain outstanding include the following:

Americans with Disabilities Act (ADA) Compliance

After the implementation of the project, it was determined that the Cale multi-space pay stations were not compliance with City, State, and or Federal ADA requirements. Cale agreed to lower the meters 1.5 inches at their expense to resolve the problem. In addition, agreement was reached on the appropriate ADA standard to be used for any subsequent installation of the multi-space technology. Cale and City staff completed the work on October 1, 2006, and the issue is resolved.

Credit Card Reconciliation

Initially, there was difficulty reconciling credit card deposits to multi-space pay station source transactions. Cale worked diligently with staff to resolve the issue. City staff also conferred with staff from the City of Portland, Oregon who currently have 200 Cale meters installed. Portland was not experiencing the same reconciliation problems. However, they were using real-time authorization for their credit card transactions. In January, Cale reconfigured the pay stations for real-time credit card authorization. There are still occasional discrepancies. However, these minor discrepancies are not material and Cale continues to work diligently to satisfy our needs in this area.

Pay & Display vs. *Pay by Space*

Although the Downtown Community Parking District has made a commitment to the *Pay & Display* model, this configuration does require greater enforcement resources than the alternative *Pay by Space* model. In addition, the *Pay & Display* model precludes the use of some new enforcement and customer service related technologies that may become available in the near future. As such, the option for *Pay by Space* configuration should not be excluded. Both configurations have their own strengths and weaknesses and may perform better in a given application. A more comprehensive comparison of the relevant strengths and weaknesses should be compiled to assist in planning for subsequent implementations.

CONCLUSION

The new multi-space parking pay stations performed well over the duration of the pilot period. While initial procurement and monthly communication and maintenance costs are higher than single head meters, these additional costs are offset over time by significantly lower coin collection and data gathering costs coupled with resulting parking meter revenue increases. The equipment is reliable and the vendor provided excellent service and support throughout the pilot period.
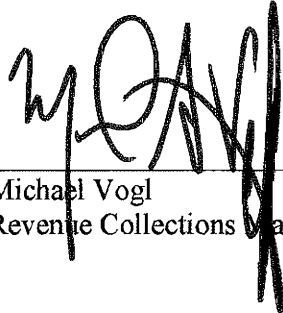
The volume of parking citations issued and resulting citation revenues decreased. Some of the reduction is attributable to Municipal Code discrepancies, the short term impracticality of modifying existing enforcement methods, and increased compliance with parking regulations due to the credit card payment option. However, enforcing parking meter related violations in a *Pay & Display* environment will likely require additional enforcement staff and resources to maintain optimal enforcement levels for all violations. Multi-space parking pay station related parking citation dismissal rates were significantly lower than the average rate calculated prior to the pilot project.

The multi-space parking pay stations clearly improved overall parking space occupancy, duration, and turnover. The ability to accept payment by credit card and impose different rates for different hours and days are essential tools to maximize the impact and leverage the use of varied rates and time restriction. The use of multi-space parking pay stations reduced the number of obstacles on the sidewalk and improved overall street aesthetics. It was also confirmed that, with *Pay & Display* pay stations, parking stall delineations could be removed to further increase the parking supply. It is reasonable to conclude that removing parking "T"'s on a wide scale will further increase parking meter revenue and reduce street maintenance costs.

Overall feedback from users of the multi-space parking pay stations was highly favorable. Feedback from other Downtown stakeholders was less upbeat but still positive. Most important, survey respondents overwhelmingly preferred the new multi-space pay stations over single head parking meters. Users readily adapted and accepted the new technology with minimal complaints.

The multi-space parking pay stations are both a reliable and cost effective alternative for metered parking zones. The technology provides a variety of significant benefits over single head parking meter equipment with minimal challenges and is better suited to support both current and future needs related to the effective management of the City's parking resources.

Respectfully Submitted,

Michael Vogl
Revenue Collections Manager

EVALUATION FOR MULTI-SPACE METERS
May 17, 2006

This is the data we will be collecting as the baseline before we go-live with the new Multi-space meters on June 5th. We will be collecting the same data after the new meters are installed as evaluation criteria for success. There are four different time frames methods. They should be collected using the same method after go-live for comparison. These are:

      a) One time cost/revenue
      b) 9month period/ Biweekly data per block face
      c) One time 9 month period per beat (before and after pilot)
      d) 9 month period/Biweekly data per block (both sides - not face)

COST: (Parking Management will collect baseline): Installation and maintenance, and collection. We will compare the cost of installing and maintaining, and collecting the new devices versus the cost of installing and maintaining conventional single head parking meters.

Factors	Method
Cost per single space meter	One time cost present meter and Multi after **(JOSE)**
Cost of installation	One time cost present meter and Multi after **(JOSE)**
Monthly Cost of meter maintenance	9month period/ Biweekly data per block face **(JOSE)**

ENFORCEMENT: (Parking Management will collect baseline): Issues related to the time that it takes to enforce the new devices versus the time that it takes to enforce conventional single head parking meters.

Factors	Method
Injury reports	One time 9 month period per beat (before and after pilot) **(ALINA)**
Number of citations issued and revenue	9 month period/Biweekly data per block (both sides-not ace) **(DAN DICKEL)**
Time per block to enforce meters	Two week special collection/per beat, before and after pilot **(ALINA)**

OPERATIONS: (Parking Management and Traffic Engineering will collect): We will evaluate the parking occupancy increase or decrease when compared to what we have now. Revenues from the different type of payment method separated (coins, bills, cards, credit cards, etc.) We will also evaluate the increase in parking supply.

Factors	Method
Collection time per meter	9 month period/Biweekly data per block face **(JOSE)**
Number of malfunctions	9 month period/Biweekly data per block face **(JOSE)**
Pilot area meter revenue	One time 9month period revenue before and after pilot **(JOSE)**
Usage per meter/space	Part of Duration study **(TRAFFIC ENG.)**
Parking Turn Over/space (parking supply)	Part of Duration study **(TRAFFIC ENG.)**

PUBLIC ACCEPTANCE: We could track the number of meter service requests/complaints. This is the area where we need CCDC and the DPMG to assist us. We will need anecdotal information from businesses and users of on street parking downtown, and if there are funds available, potentially a survey during a public education campaign.

Factors	Method
Number of Complaints	Collected by Traffic Eng from different sources **(TRAFFIC ENG.)**
Review factors to be included in a survey	Collected by Traffic Eng from different sources **(TRAFFIC ENG.)**
Number of Positive Comments	Collected by Traffic Eng from different sources **(TRAFFIC ENG.)**
Public Acceptance	PIO will send Outreach documentation **(PIO)**

SURVEY OF CITIES WITH CALE PAY AND DISPLAY METERS BY

After speaking with Parking Enforcement Supervisors at other Parking Enforcement agencies that use the Cale Multi-Space Pay and Display meters, I have found they have experienced many of the same enforcement problems and difficulties that we have.

Enforcement difficulties:

- malfunctioning meters

- not accepting every type of payment (bills, coins, credit cards)

- vandalized (glued slots, broken into for money)

- receipts wrongfully displayed (none, upside down, covered, folded, wrong location)

- inability to see receipts in oversized vehicles (tractor-trailers, raised vehicles)

- large vehicles using two or more spaces

Cities and Parking Enforcement Supervisors

Boston MA
Irene Rizzo (617) 635-3125

Portland OR
Mark Freedman (503) 832-1209

Berkley CA
Marla Clark (510) 981-5890

Baltimore MD
Gail Desch   (443) 573-2800

Pittsburgh PA
Nancy Coleman (412) 255-2800

These cities have been using the Cale Pay and Display meters for minimum of at least two years. As stated, they all have experienced the same difficulties and problems we have.

Following are some details of their enforcement:

- All use the displayed on the dash receipt. The exception is Portland, who uses a receipt that sticks to the passenger side window.

- All enforce the Cale metered area by walking their beat, except Portland's officers who walk or ride bikes.

- All have the same city-wide parking rate. The public is able to park in any metered area, even at single space meters. Receipts must be properly displayed, and time zones are enforced.

- If someone decides to purchase another receipt shortly after the first receipt, the officer must calculate and add the time. Times zones are enforced.

- Vehicles are cited for receipts not being properly displayed, as per the instruction on the receipts and meter.

- The cities judicial systems are upholding the citations. Officers must note how the   receipt was displayed and include the receipt serial number or as and as much of the information as possible.

- When no receipt is displayed, the vehicle is cited. Pittsburgh has the photo capability on their hand held computers.

- Portland was the only city with stall makings, and they are going to be removed. The belief is more room for parking. Only one receipt is needed for any size vehicle, including a trailer. For tall vehicles, the officer must see if it is displayed. Portland does not have that problem we do, because the receipts are affixed to the passenger side window.
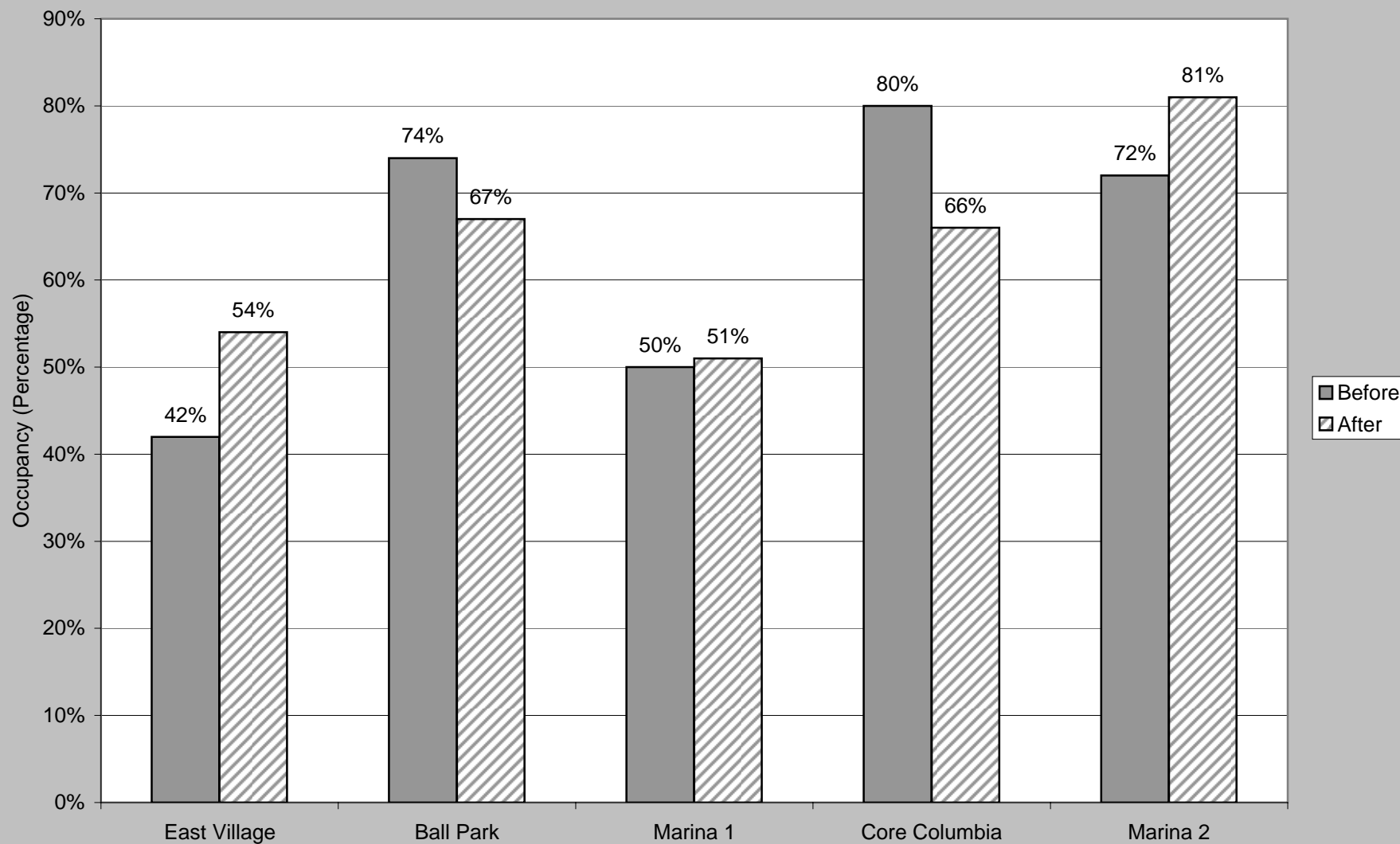
PARKING DURATION STUDY ATTACHMENT 3

(Based on 60-minute check intervals, 6/1/2006)

Location			(%)	(Hrs)	(Veh/space)
Street	**Block**		**Occupancy**	**Duration**	**Turnover**
EAST VILLAGE					
'F' Street	s/s	15th to 16th	0.02	1.00	0.17
'F' Street	s/s	14th to 15th	0.18	2.44	0.75
'F' Street	s/s	13th to 14th	0.89	5.64	1.57
'F' Street	s/s	Park to 13th	0.37	1.86	2.00
'F' Street	s/s	11th to Park	0.12	1.00	1.20
'F' Street	s/s	10th to 11th	0.17	1.25	1.33
'F' Street	s/s	9th to 10th	0.62	2.67	2.33
13th Street	w/s	F to G	0.48	1.84	2.59
'F' Street	n/s	14th to 15th	0.01	1.00	0.05
'F' Street	n/s	13th to 14th	0.50	2.12	2.13
'F' Street	n/s	Park to 13th	0.11	1.00	1.00
'F' Street	n/s	11th to Park	0.42	3.80	1.00
'F' Street	n/s	10th to 11th	0.22	3.20	0.63
'F' Street	n/s	9th to 10th	0.75	1.69	4.00
BALL PARK					
'J' Street	n/s	10th to 11th	0.78	4.13	1.88
08th Ave	e/s	J to Island	0.58	1.32	4.40
'J' Street	s/s	06th to 07th	0.89	2.11	4.22
'J' Street	n/s	06th to 07th	1.00	2.86	3.50
MARINA 1					
02nd Avenue	w/s	Island to Market	0.57	2.03	2.82
02nd Avenue	e/s	Island to Market	0.43	1.38	3.08
02nd Avenue	e/s	island to J	0.51	2.31	2.21
02nd Avenue	w/s	Island to J	0.92	3.44	2.67
CORE COLUMBIA					
'F' Street	n/s	01st to Front	1.00	2.37	4.22
'F' Street	n/s	Front to Union	1.00	1.71	5.83
'F' Street	n/s	Union to State	1.00	2.94	3.40
State Street	e/s	F to E	0.92	2.52	3.67
Union Street	w/s	F to G	0.80	2.00	4.00
Union Street	w/s	G to Market	0.89	5.07	1.75
Union Street	e/s	G to Market	0.43	1.43	3.00
Market Street	n/s	Union to State	1.00	4.00	2.50
State Street	e/s	Market to G	0.92	4.58	2.00
State Street	e/s	F to G	0.65	2.05	3.17
Market Street	n/s	Front to Union	0.79	2.17	3.63
Front Street	w/s	G to Market	0.80	2.21	3.63
'G' Street	s/s	State to Union	0.96	4.10	2.33
'G' Street	s/s	Union to Front	0.76	1.81	4.20
'G' Street	n/s	Front to 01st	0.84	1.83	4.60
'G' Street	n/s	Front to Union	0.82	2.23	3.67
'G' Street	n/s	Union to State	0.50	1.60	3.13
MARINA 2					
Kettner Boulevard	e/s	G to F	0.91	6.41	1.42
Kettner Boulevard	w/s	G to F	0.89	5.17	1.71
Pacific Highway	e/s	G to F	0.69	3.44	2.00
'F' Street	n/s	Kettner to Pacific Hwy	0.39	2.60	1.50

PARKING DURATION STUDY ATTACHMENT 4

(Based on 60-minute check intervals, 1/17/2007)

Location			(%)	(Hrs)	(Veh/space)
Street	**Block**		**Occupancy**	**Duration**	**Turnover**
EAST VILLAGE					
'F' Street	s/s	15th to 16th	0.45	2.45	1.83
'F' Street	s/s	14th to 15th	0.85	4.25	2.00
'F' Street	s/s	13th to 14th	0.83	5.80	1.43
'F' Street	s/s	Park to 13th	0.63	2.44	2.57
'F' Street	s/s	11th to Park	0.44	1.47	3.00
'F' Street	s/s	10th to 11th	0.73	2.44	3.00
'F' Street	s/s	9th to 10th	0.63	3.17	2.00
13th Street	w/s	F to G	0.69	3.29	2.09
'F' Street	n/s	14th to 15th	0.64	4.48	1.42
'F' Street	n/s	13th to 14th	0.49	4.88	1.00
'F' Street	n/s	Park to 13th	0.29	2.09	1.38
'F' Street	n/s	11th to Park	0.40	2.00	2.00
'F' Street	n/s	10th to 11th	0.26	2.33	1.13
'F' Street	n/s	9th to 10th	0.59	2.76	2.13
BALL PARK					
'J' Street	n/s	10th to 11th	0.56	2.29	2.43
08th Ave	e/s	J to Island	0.66	1.61	4.13
'J' Street	s/s	06th to 07th	0.67	1.54	4.33
'J' Street	n/s	06th to 07th	0.79	2.22	3.56
MARINA 1					
02nd Avenue	w/s	Island to Market	0.45	2.33	1.91
02nd Avenue	e/s	Island to Market	0.57	2.06	2.75
02nd Avenue	e/s	island to J	0.52	2.50	2.11
02nd Avenue	w/s	Island to J	0.31	2.07	1.50
CORE COLUMBIA					
'F' Street	n/s	01st to Front	0.96	2.65	3.64
'F' Street	n/s	Front to Union	0.94	2.06	4.57
'F' Street	n/s	Union to State	0.75	1.82	4.13
State Street	e/s	F to E	0.66	2.12	3.09
Union Street	w/s	F to G	0.74	1.76	4.20
Union Street	w/s	G to Market	0.42	1.75	2.40
Union Street	e/s	G to Market	0.52	1.53	3.40
Market Street	n/s	Union to State	0.45	1.89	2.38
State Street	e/s	Market to G	0.27	1.59	1.70
State Street	e/s	F to G	0.52	1.94	2.67
Market Street	n/s	Front to Union	0.56	1.67	3.38
Front Street	w/s	G to Market	0.58	1.88	3.09
'G' Street	s/s	State to Union	0.36	1.53	2.38
'G' Street	s/s	Union to Front	0.78	2.04	3.83
'G' Street	n/s	Front to 01st	0.70	1.48	4.71
'G' Street	n/s	Front to Union	0.69	2.18	3.14
'G' Street	n/s	Union to State	0.41	1.61	2.57
MARINA 2					
Kettner Boulevard	e/s	G to F	0.84	6.31	1.33
Kettner Boulevard	w/s	G to F	0.81	7.22	1.13
Pacific Highway	e/s	G to F	0.73	4.13	1.78
'F' Street	n/s	Kettner to Pacific Hwy	0.87	4.83	1.80

Chart showing Occupancy (Percentage) comparing Before and After for five locations:

Location	Before	After
East Village	42%	54%
Ball Park	74%	67%
Marina 1	50%	51%
Core Columbia	80%	66%
Marina 2	72%	81%

PARKING DURATION OCCUPANCY COMPARISON   ATTACHMENT 6

(Based on 60-minute check intervals)

Street	Block		'Before' Occupancy	'After' Occupancy
EAST VILLAGE				
'F' Street	s/s	15th to 16th	0.02*	0.45*
'F' Street	s/s	14th to 15th	0.18*	0.85*
'F' Street	s/s	13th to 14th	0.89	0.83
'F' Street	s/s	Park to 13th	0.37	0.63
'F' Street	s/s	11th to Park	0.12	0.44
'F' Street	s/s	10th to 11th	0.17	0.73
'F' Street	s/s	9th to 10th	0.62	0.63
'F' Street	w/s	F to G	0.48	0.69
'F' Street	n/s	14th to 15th	0.01*	0.64*
'F' Street	n/s	13th to 14th	0.50	0.49
'F' Street	n/s	Park to 13th	0.11	0.29
'F' Street	n/s	11th to Park	0.42	0.40
'F' Street	n/s	10th to 11th	0.22	0.26
'F' Street	n/s	9th to 10th	0.75	0.59
		Average	**0.42**	**0.54**
BALL PARK				
J' Street	n/s	10th to 11th	0.78*	0.56*
08th Avenue	e/s	J to Island	0.58	0.66
J' Street	s/s	06th to 07th	0.89	0.67
J' Street	n/s	06th to 07th	1.00*	0.79*
		Average	**0.74**	**0.67**
MARINA 1				
02nd Avenue	w/s	Island to Market	0.57	0.45
02nd Avenue	e/s	Island to Market	0.43	0.57
02nd Avenue	e/s	island to J	0.51	0.52
02nd Avenue	w/s	Island to J	0.92*	0.31*
		Average	**0.50**	**0.51**
CORE COLUMBIA				
'F' Street	n/s	01st to Front	1.00	0.96
'F' Street	n/s	Front to Union	1.00	0.94
'F' Street	n/s	Union to State	1.00	0.75
State Street	e/s	F to E	0.92	0.66
Union Street	w/s	F to G	0.80	0.74
Union Street	w/s	G to Market	0.89	0.42
Union Street	e/s	G to Market	0.43	0.52
Market Street	n/s	Union to State	1.00*	0.45*
State Street	e/s	Market to G	0.92*	0.27*
State Street	e/s	F to G	0.65	0.52
Market Street	n/s	Front to Union	0.79	0.56
Front Street	w/s	G to Market	0.80	0.58
'G' Street	s/s	State to Union	0.96*	0.36*
'G' Street	s/s	Union to Front	0.76	0.78
'G' Street	n/s	Front to 01st	0.84	0.70
'G' Street	n/s	Front to Union	0.82	0.69
'G' Street	n/s	Union to State	0.50	0.41
		Average	**0.80**	**0.66**
MARINA 2				
Kettner Boulevard	e/s	G to F	0.91	0.84
Kettner Boulevard	w/s	G to F	0.89	0.81
Pacific Highway	e/s	G to F	0.69	0.73
'F' Street	n/s	Kettner to Pacific Hwy	0.39	0.87
		Average	**0.72**	**0.81**

* These occupancies were not included in calculating the average for each neighboorhod since the 'after' change
   to occupancy levels is attributed to factros other than the installation of the multi-space parking pay stations.

THE CITY OF SAN DIEGO

L L L L L
L L L L L Centre City
L L L L L Development
L L L L L Corporation
L L L L L

PAY & DISPLAY PARKING USER SURVEY

Location: O Marina   O Ballpark   O East Village

Block Name & Number (Optional): _____

How often do you use the Pay & Display meters?

O   O   O   O
Daily   Weekly   Monthly   Rarely

Do you prefer the Pay & Display meters to the single head meters?

O   O
Yes   No

Was the signage along the block adequate in number and located properly?

O   O
Yes   No

Were the messages displayed on the signage clear and easy to understand?

O   O
Yes   No

Was it easy to locate the Pay & Display meter after you parked?

O   O
Yes   No

Was the Pay & Display meter located within a reasonable distance to your vehicle?

O   O
Yes   No

Did you find the Pay and Display meter easy to use?

O   O
Yes   No

Do you think the option of paying with a credit card is beneficial?

O   O

Yes   No

Do you feel that replacing multiple single-space meters with one Pay & Display meter improves/detracts from the overall look of the street?

O   O   O

Improves   Detracts   Neutral

Comments: _____

_____

_____

_____

LLLLL Centre City
LLLLL Development
LLLLL Corporation
LLLLL

■SEAR

:: HOME

ABOUT CCDC   PROJECTS   RESOURCES   PLANNING   NE

⬆PROJECTS
:: Interactive Map
:: All Projects
:: Residential
:: Commercial
:: Mixed Use
:: Public /
   Infrastructure
:: Special Programs

⬆RESOURCES
:: CCDC Board
:: Info. Ctr & Tours
:: Living Guide
:: Planning
:: Newsletters/Pubs
:: Centre City
   Advisory Committee
:: 2006 Annual Report
   [PDF 1.2MB]
:: Links

📶 SUBSCRIBE TO
    NEWS AND
    EVENTS FEEDS

CLICK HERE TO
SIGN UP FOR
EMAIL ALERTS

LIVE VIEWS
-of-
DOWNTOWN
CLICK HERE

NEVER
UNDERESTIMATE
the
POWER of the
WATERFRONT

Home >> Projects >> Special Programs >> Improving Downtown Parking >> Survey

PAY & DISPLAY PARKING SURVEY

As part of CCDC's comprehensive public outreach process, CCDC is conducting a survey to gather information about the Pay & Display parking meters. Please take a few minutes to answer the following questions:

1. Location:

◉ Marina   ◉ Ballpark   ◯ East Village

2. Block Name & Number:

_____ _____

3. How often do you, your customers/guests/employees use the Pay & Display meters?

◯ Daily   ◉ Weekly   ◯ Monthly   ◯ Rarely   ◯ Unknown

Comments:

4. Do you feel that the Pay & Display meters are conveniently located?

◉ Yes   ◯ No

Comments:

5. Do you feel that you, your customers/guests/employees benefit from being able to use a credit card at the Pay & Display meters?

◯ Yes   ◯ No

Comments:

6. Do you, your customers/guests/employees prefer the Pay & Display to the single-space meters?

O Yes O No

Comments:

7. Do you feel that replacing mulitple single-space meters with one Pay & Display meter improves/detracts from the overall look of the street?

O Improves O Detracts O Neutral

Comments:

8. Have you noticed any problems with the Pay & Display meters?

O Yes O No

Comments:

9. What advantages have you noticed to the Pay & Display meters?

10. What disadvantages have you noticed to the Pay & Display meters?

11. Have you benefited from the installation of the Pay & Display meters?

○ Yes ○ No ○ Neutral

Comments:

12. Overall, what is your opinion of the Pay & Display meters?

Submit Survey

Contact Us Disclaimer PR
News RSS Even

New Technology Parking Survey
User Responses

Location:	Number	% of Total		Easy to Use:	Number	% of Total
Marina	33	54%		Yes	50	82%
East Village	18	30%		No	10	16%
Ballpark	10	16%		Neutral	1	2%
	61	100%			61	100%

Frequency of Use:				Credit Card Beneficial:		
Daily	15	25%		Yes	52	85%
Weekly	6	10%		No	6	10%
Monthly	5	8%		Neutral	3	5%
Rarely	35	57%			61	100%
	61	100%				

Prefer New to Old:				Overall Look of Street:		
				Improves	43	70%
Yes	48	79%		Detracts	0	0%
No	12	20%		Neutral	15	25%
Neutral	1	2%		N/A	3	5%
	61	100%			61	100%

Signage Adequate:		
Yes	49	80%
No	12	20%
Neutral	0	0%
	61	100%

Signage Clear and East to Understand:		
Yes	56	92%
No	5	8%
Neutral	0	0%
	61	100%

Easy to Locate Meters:		
Yes	54	89%
No	7	11%
Neutral	0	0%
	61	100%

Reasonable Distance:		
Yes	53	87%
No	6	10%
Neutral	2	3%
	61	100%

New Technology Parking Survey
Online Responses

Location:	Number	% of Total
Marina	20	56%
East Village	13	36%
Ballpark	3	8%
	36	100%

Frequency of Use:		
Daily	10	28%
Weekly	11	31%
Monthly	1	3%
Rarely	12	33%
Unknown	2	6%
	36	100%

Conveniently Located:		
Yes	23	64%
No	11	31%
N/A	2	6%
	36	100%

Credit Cards Beneficial:		
Yes	30	83%
No	5	14%
N/A	1	3%
	36	100%

Prefer New to Old:		
Yes	18	50%
No	16	44%
N/A	2	6%
	36	100%

Overall Look of Street:		
Improves	25	69%
Detracts	3	8%
Neutral	8	22%
	36	100%

Noticed any Problems:		
Yes	12	33%
No	23	64%
N/A	1	3%
	36	100%

Benefited from Installation:		
Yes	13	36%
No	10	28%
Neutral	10	28%
N/A	3	8%
	36	100%

User Parking Survey Comments:

- It should take dollar bills, doesn't make sense to put $1.00 or $2.00 on a credit card.
- Instructions should be in Spanish as well.
- "P" on meter was thought to stand for "Parking", it should spell out "Pay Station".
- Proximity is key.
- Refund with prepaid parking card would be helpful.
- Make supply of parking cards more reliable. Should be refunds.
- Cost too much. Don't like walking back to car to post ticket, especially if it's raining.
- Doesn't like that refund is not allowable on the pre-paid debit cards.
- Pre-paid debit cards don't refund unused amount.
- Would prefer to use single-head meters cause they're closer to work.
- The credit card feature did not work.
- Doesn't refund your pre-paid debit card amount.
- Marked parking spaces are needed to avoid confusion.
- Credit card feature did not work the first time. Prefers to pay small amounts with cash.
- Would like the machine to accept dollars. Prefer to park at a 4-hour meter if she plans to park for 2 hours to avoid getting a ticket.
- Machine wasn't working while being interviewed. Customer had to move to a different parking meter.
- Would rather park on the street, rather than pay $20+ at the Hyatt.
- "Espanol" button also offers other languages. Those languages offered should be listed.
- Credit card feature doesn't work often. Doesn't like walking to and from machine to post ticket in car.
- Need more signs pointing to the location of the meter.
- New meter is very misleading because some people think you can park for free.
- Meter doesn't take change well, usually has to insert coins twice. Meter doesn't like credit cards either.
- How much will it cost taxpayers to replace old meters with new?
- Instead of a "P" displayed on the meter, it should read "Parking Meter".