Parking Study
June 19, 2017

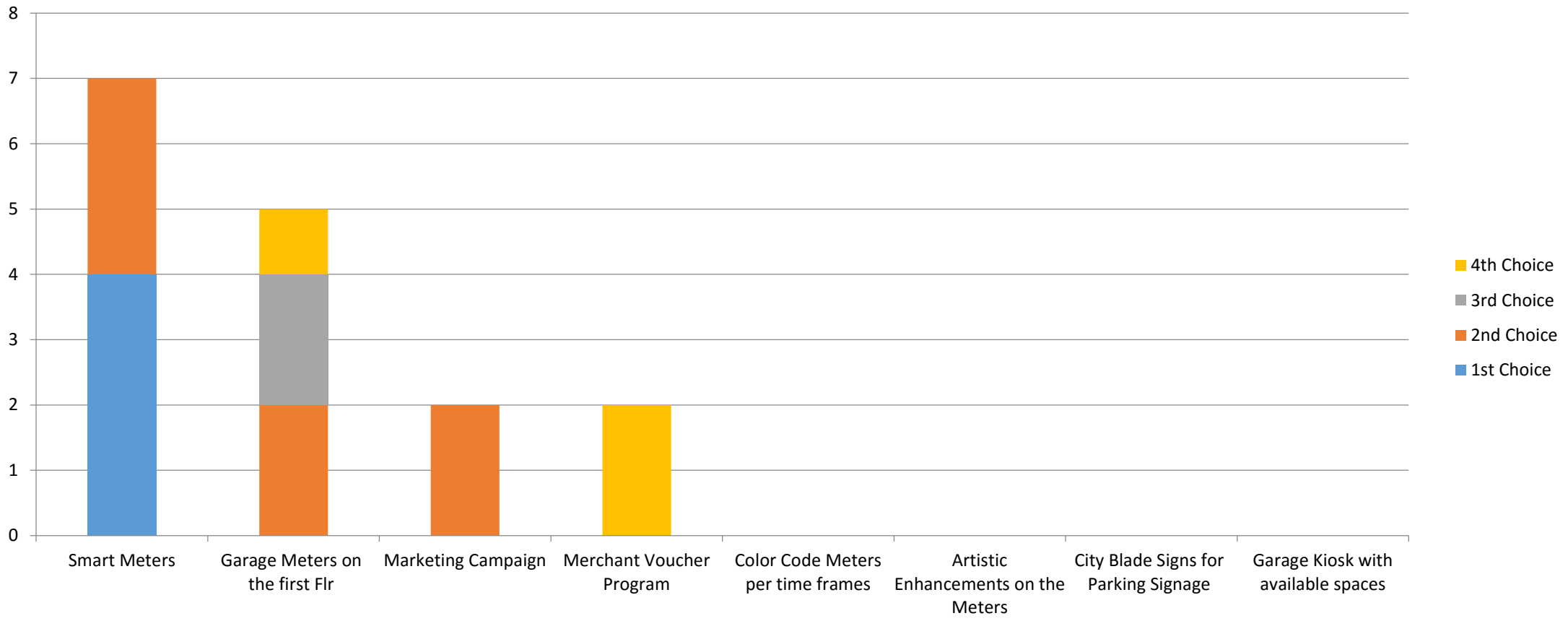
Public Input Process

- 6 Stakeholder meetings
- 2 public hearings
- Online survey with 449 responses
- Website and social media

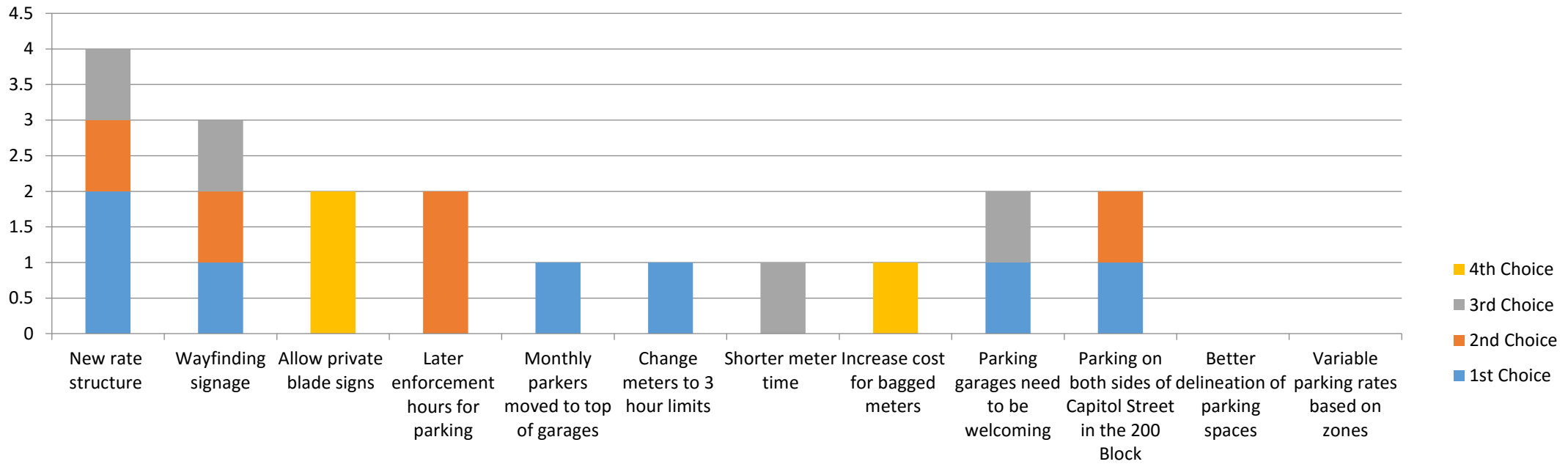
Top Public Feedback

- SMART meters with credit card, mobile pay, variable rates and times and internet access space availability for City parking, review enforcement approach
- Bagged parking meters should be eliminated or decreased, not available to rent on the weekends and increased rates
- Decreased loading zones, additional handicap spaces, need improved delineation of parking spaces in study area
- Garages need to offer multiple pay options, a cleaner environment, improved lighting, increased security measures and first floor daily parking spaces availability
- Directional, lighted blade signs on garage, space availability signage on garages
- Free weekend parking at meters and garages, beginning at 5pm on Fridays
- Marketing Campaign, Merchant Program, Discount Benefit cards program offerings

Public Meeting Input-New Services

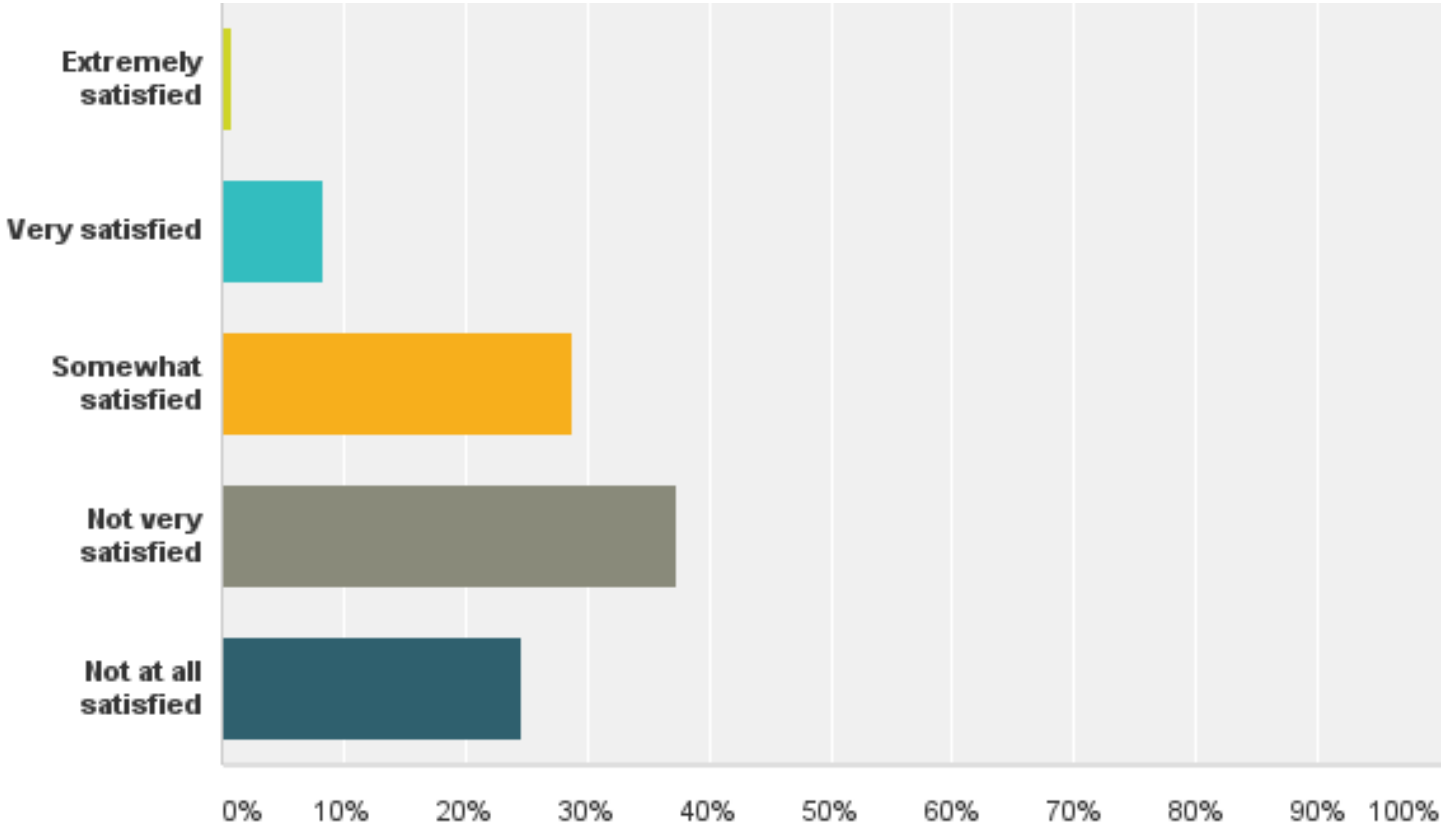


Public Meeting Input-Requested Changes



Online Survey Question: How satisfied are you with the City of Charleston overall in terms of public parking in the Downtown?

- Answered: 447 Skipped: 2



Parking Study Area

- Parking Study Zones

- Morris Street to Smith Street to Piedmont to Court Street to Washington Street, East to the Elk River to Kanawha Boulevard back to Morris

- The zones are an extension of the Imagine Charleston recommendation to create niche districts

On Street Parking Description

- 1,008 on street parking spaces

- Meter rates
  - 3 zones $1.00 for 2 hours maximum
  - 3 zones $ .50 for 2 hours maximum
  - 6 minute minimum for a nickel

- Average meter age circa 1987. Parking industry standard outlines life expectancy is 12 years to 15 years for meters

- Manual collection effort with no mechanism to track revenue by individual meter

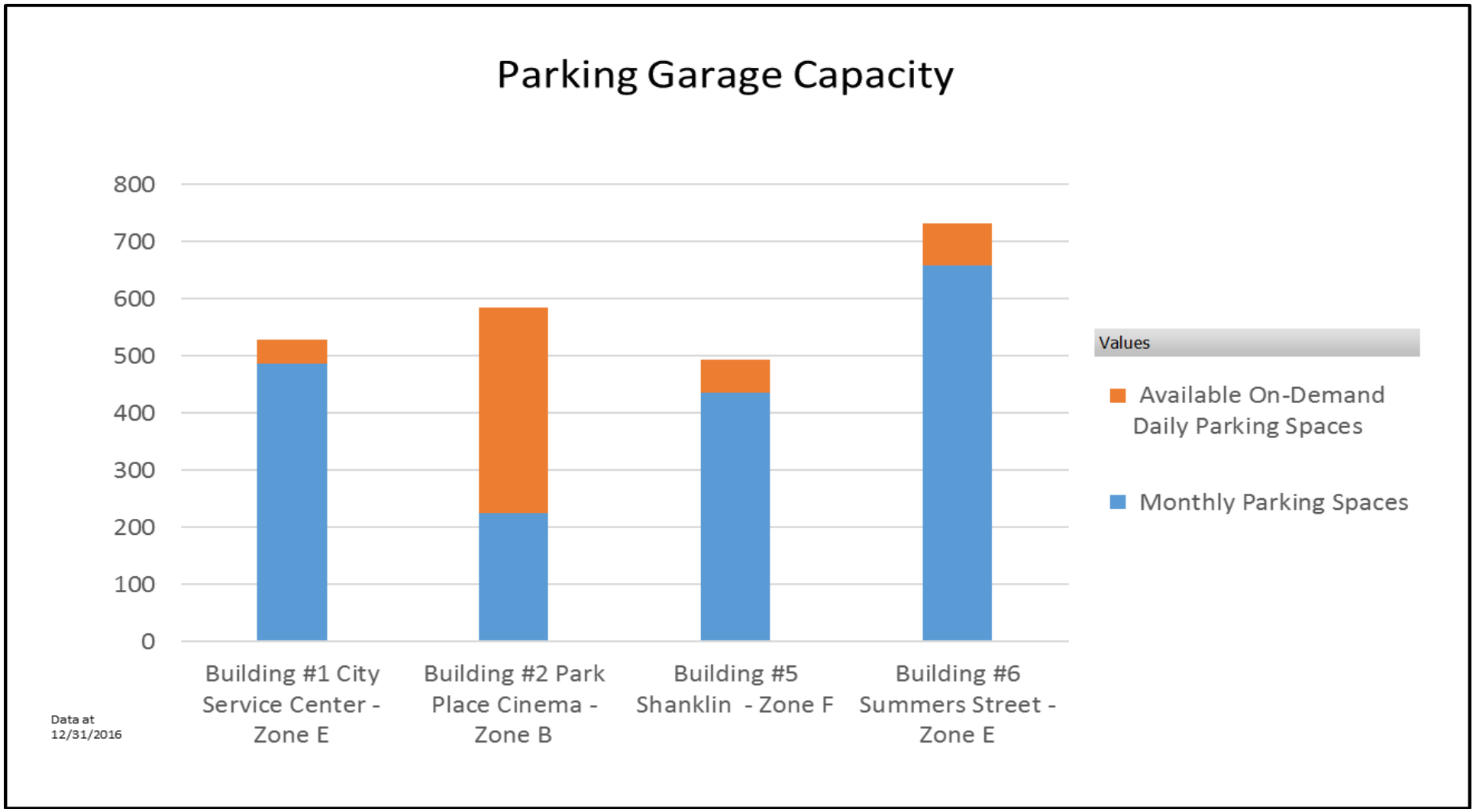
- No reports or analytics to track meter utilization

City Garages

- Building #1 -City Service Center-McFarland Street
- Building #2 -Park Place Cinema- Washington Street
- Building #3 – Civic Center- Washington Street- Greyhound Station
- Building #4- Civic Center –Quarrier Street
- Building #5- Shanklin-Virginia Street at City Hall
- Building #6- Summers Street
- Parking Garages & Lots

City Garages

- 2,339 Total spaces
- 1,807 Monthly
- 532 Daily



City Garages continued:

- Operational hours
  - Building 1-CSC-McFarland — 5:30 am to 10:00 pm
  - Building 2- Park Place Cinema — 5:30 am to 1:00 am
  - Building 5-Shanklin-City Hall — Always open
  - Building 6-Summers Street — Always open

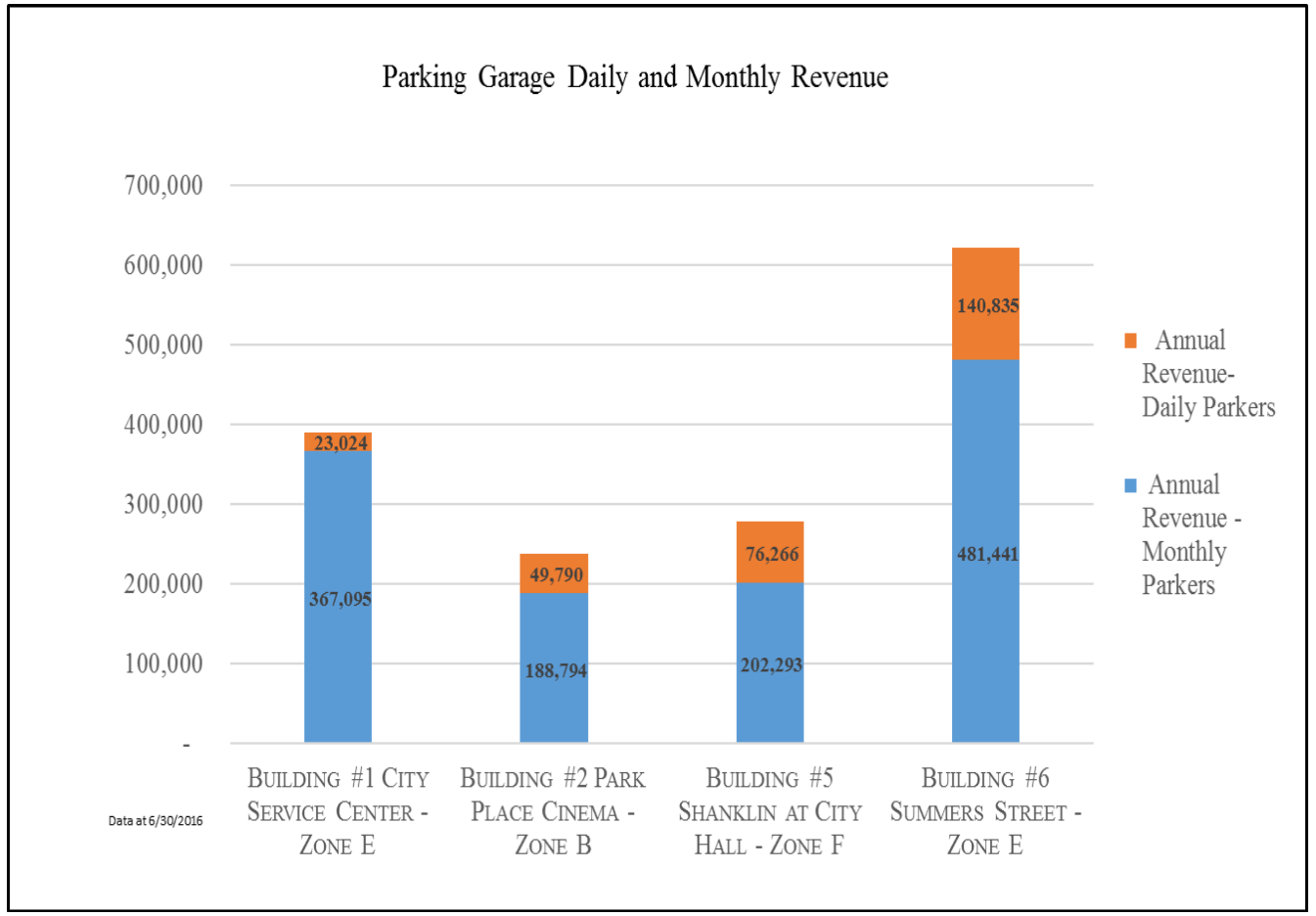
- 3 different access systems for garages
  - Cash payment system is 15 years old not supported version
  - Do not currently take credit card payments or mobile pay
  - Do not have a means to determine space availability
  - No interface to our Financial system
  - Physical Gate arms and spitters have been piecemealed from 1994 to 2014

- No reporting or analytics available for management purposes

City Garages continued:

Garage Daily Rates $	
0 to 1 hour	1.00
1 hr & 1 min to 2 hrs	2.00
2 hrs & 1 min to 3 hrs	3.00
3 hrs & 1 min to 4 hrs	4.00
4 hrs & 1 min to All Day	5.00
Event Parking	3.00

Garage Monthly Rates $	
Rooftop State Accounts	35.00
Rooftop Spaces	45.00
Regular Spaces	60.00
Reserved Spaces	70.00
Lot Monthly Range Rate	40-70



Do We Have Enough Parking?

Peak Parking Demand Model

- Peak Parking Demand Model was created to forecast future demand
- Based on building vacancy rates, underutilized properties, and the likelihood of future development
- Based on peak demand time defined as 9:00 a.m. and 4:00 p.m.
- Uses primarily occurring outside the peak demand time were excluded . Such uses include churches, Appalachian Power Park, funeral homes, nightclubs, the Benie Kedem Temple, the Civic Center, and the Municipal Auditorium
- Derived from the book titled “Parking Generation, 3rd Edition” by the Institute of Transportation Engineers (ITE)

Demand analysis continued:

Parking Surplus/ Deficit by Zone

Parking Zone	On-Site Parking Spaces Provided	On-Street Parking	Theoretically Required Parking	Net Difference
B	3,524	151	1,815	1,709
C	3,566	256	2,567	999
D	2,124	188	1,774	350
E	5,532	271	8,415	(2,883)
F	2,072	49	2,154	(82)
G	6,556	93	2,919	3,637
Total	23,374	1,008	19,644	+3,730

Utilization Analysis

- An inventory was conducted in the spring and the fall in 2016
- All on street and City garage parking spaces were counted each hour from 7 a.m. to 9 p.m.
- Spaces in participating private garages were counted at irregular intervals
- Data was entered into the City's Geographic Information System (GIS)
- Parking Location Types

Utilization Analysis continued:

- Weekend vs Weekdays
- All Week Days Percent Utilized
- All Week Ends Percent Utilized
- 85% target occupancy level derived from the book titled ”The High Cost of Free Parking” by Professor Donald Shoup
- For the total study area, the overall occupancy rate for the entire inventory period for on-street parking averaged peak of 55% on the weekdays and an averaged peak of 40% on the weekends

Zone Analysis

- Zone B- average peak of 60% on weekdays and an average peak of 45% on weekends
- Zone C-average peak of 35% weekdays and weekends
- Zone D-average peak of almost 40% on the weekdays and weekends
- Zone E –average peak of 70% to 80% on the weekdays and an average peak of 60% to 70% weekends
- Zone F –between a minimum average of 20% and a maximum peak of 90% weekdays and between a minimum average of 15% to a maximum peak of 60% on weekends
- Zone G-average peak of 40 to 50% with spikes of 100% during events.

Utilization Analysis continued:

- All Week Days Percent Utilized

- The Inner Core, bounded by Virginia Street, Summers Street, Lee Street and Hale Street has average peak utilization above 85% several times during the day

- The inner core has dense zero lot line construction with minimal on-site parking comprised of professional offices, followed by restaurants, retail, and some service establishments

- The parking meter rates are structured for low cost, unlimited use and convenience which is likely a contributing factor to the low turnover rate, limiting availability for daily parkers

Additional Factors Affecting Utilization

- On Street meter verses off street garages pricing issue affecting utilization

❑ Meter	2 hours	$.50 or $1.00
❑ Garage	1.1 to 2 hours	$2.00

- Meters with no functionality to address turnover

- No Directional signage, no availability in garage signage, no internet space availability

Recommendations

Objectives:

- Enhance overall parking experience
- Integrate parking information systems with increased functionality for customers and parking management
- Collect accurate data to make informed decisions
- Foster ongoing communications with public, private and downtown business

Low Hanging Fruit

- A revision to the bagged meter program
- Initiated a grant to put cameras in stairwells of garages 24 hour in the garages is underway
- A 5 year maintenance schedule for garages is being drafted

Recommendations-Technology

On-Street

- Phase One-upgrade 200 mechanical meters to SMART meters in Zone E

With the following capabilities

  - Credit card
  - Mobile pay options
  - Programmable for variable time and rates
  - Real time occupancy counts
  - Enforcement violations notification
  - Real Time Parking Availability
  - Non coin electronic funds transfer with interface to City Financial system
  - Magnetic in meter head sensors on meter head

- Initiate Mobile Payment Software on remaining mechanical meters in the study area (estimate $ .25 transaction per transaction fee)

Recommendations-Technology

Garages

- Phase One-Implement changes at 1, 5, 6 (McFarland St., Shanklin and Summers Street)
  - Remove the gate and spitters
  - Hang tags for monthly customers
  - SMART meter for daily parkers at designated first floor spaces
  - $ .25 per hour rate with manual meters on rooftop deck
  - Digital parking availability signs in all garages

Recommendations-Non Technology

- Develop a pricing to encourage parking outside high demand areas and encourage more turnover in high demand areas
- Redeploy underutilized meters on to Lee Street and Washington Street
- Zero Occupancy
- Conduct a further review of the handicap spaces, loading zones, and the placement of other types of parking spaces

Recommendations-Non Technology

- Develop RFP for design and placement of directional signs, blade signs, digital availability signs at garages and online parking websites
- Develop a informational campaign after implementing these changes
- Follow up with quarterly meetings to elicit feedback from the public and private sector

What Comes Next?

SMART Meters

Garage upgrades

New Signs

Acknowledgements

Danny Jones, Mayor

David Molgaard, City Manager

City of Charleston Parking Study Committee Members:

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