Staff Report
City of Manhattan Beach

TO: Honorable Mayor Fahey and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Bruce Moe, Finance Director
Leilani Emnace, Information Systems Manager

DATE: October 18, 2005

SUBJECT: Consideration of Additional Information Systems Specialist Position

RECOMMENDATION:
Staff recommends that the City Council approve the addition of one full time Information Systems Specialist position, and appropriate $33,000 from the Information Systems Fund to fund the position for the remainder of FY 2005-2006.

FISCAL IMPLICATION:
The annual cost of an I.S. Specialist is $79,609 including salary and benefits. Funds for the current year are available in the Information Systems Fund balance, and will need to be appropriated in order to fund the position in the current year (the $33,000 appropriation covers roughly five months). Moving forward, the position will be included in the annual budget.

BACKGROUND:
Currently, the Information Systems division in Finance is staffed with one manager and two network administrators. These full time positions are augmented with two student interns and a part time web master position. This staffing level has been the same since 2000. The division was created in 1995 in response to increased use of technology and the realization that we needed to centralize the planning and operations of our computerized systems. Initially, the division had only the manager. Later, an Information Systems Specialist was added to address day-to-day "break-fix" service issues, while the manager served as the network administrator, and planned and implemented new technologies. At that time, the City had only 5 servers and 210 peripherals, and only a handful of mission-critical applications to support.

Staff is recommending the addition of an information systems specialist position. This will allow the network administrators to focus on the major projects and higher level tasks, which are discussed below, while the information systems specialist can focus on lower level maintenance and repair activities.

DISCUSSION:
While the staffing levels have remained constant since 2000, the workload has increased. The division now manages twenty-three (23) servers, and 300 workstations and peripherals in addition to the myriad of applications across all departments.

The Internet was in its infancy in the mid 1990's, but we are now seeing more emphasis being placed on our web capabilities as a primary communication tool with our residents, businesses and other interested individuals. Our website currently has 2000 static pages and over 10,000 documents of content ranging from the Mayor's welcome page, to the City's budget, building inspection schedules, information on underground assessment districts, Council work plan, etc. We also, at Council's direction, recently added broadcasts of Council and Planning Commission meetings live on our website (a.k.a. streaming video). Additionally, Parks and Recreation now has on-line class registration. More e-Gov solutions are planned including utility payments and citizen requests on line which are discussed below.

External email, which has become the de facto communications standard for many, has introduced an entirely new set of challenges with the proliferation/transmission of viruses, spam, spyware and the like. These byproducts of technology have a dramatic impact on our systems and those who support them. As a point of reference we now receive close to 100,000 emails per month, and estimate that 63% of those are email borne threats consisting of virus attacks, spam, denial of service attacks, directory harvest attacks (an attempt to determine the valid e-mail addresses associated with an e-mail server so that they can be added to a spam database), and phishing (fraud).

We are also faced with the challenges of maintaining security of our network; this is an especially critical task given the sensitive nature of data that we maintain, and the increased use of credit cards for transactions (class registrations, water bills, etc.). Keeping ahead of the curve on the technology required to defeat these threats requires that we constantly research the market, and upgrade as appropriate for the latest applications, and provide on-going training to our staff. Securing our network requires our vigilance constantly.

In addition to these on-going tasks, we have an aggressive slate of initiatives in the coming months. The following is a brief synopsis of the most important projects:

Archiving of Streamed Council & Planning Commission Meetings
This past December we launched streaming video for the Council and Planning Commission meetings. This has allowed us to provide a live feed of those meetings over the Internet, thereby giving individuals an alternative to cable, as well as providing the content to those not living in the cable area. Currently, we offer only live broadcasts. When those meetings are not being streamed live, we rebroadcast channel 8 programming from Adelphia. The next step to completing this project is to provide archiving capabilities of the meetings. In essence, this will create an accessible video file of the meetings, retrievable from our website. The video will also be accompanied by markers indicating the beginning and ending point of each agenda item, making instant access to the specific item a reality. We have slated this task for completion before the end of the year, and will advise you when it is achieved.

Website Redesign
The FY 2005-2006 budget includes $275,000 for a complete upgrade to the City's Internet presence. This project (which includes the archiving mentioned above) will give us an updated look, allow us to monitor content more effectively (so that outdated pages are removed and pages are earmarked for review in a timely manner), and provide enhanced resident services as follows:

1. **Email Notification Capabilities:** This feature will permit residents and other interested parties to subscribe to an email list on various topics. For example, we may have an email list for Public Works projects that would notify subscribers of road closures or other disruptions. Additionally, we could have a list of new Parks & Recreation programs being offered. The subscription system will be automated, meaning staff will not need to manually add or delete names to each list, rather the subscriber enters the information, making management of the lists fairly simple.
2. **Frequently Asked Questions (FAQ's)**: An extensive FAQ database will match commonly asked questions with answers in a multitude of service areas. This will extend government operating hours and increase general information access 24/7.
3. **Citizen Request Management (CRM):** This will provide citizens with automated requests and tracking, and will tie into a database of FAQ's that will help address common requests. In the event the question cannot be answered by the FAQ database, the proposed Citizen Request Management (CRM) application can be utilized to assist the person. For example, if a user wants to report a code enforcement issue, she can complete the on-line form and the request will be automatically routed to the appropriate department for action. Requests are tracked by Management Services and the affected department to ensure timely responses.

Exchange Server Upgrade to 2003

The City currently utilizes Microsoft Exchange version 5.5 for our email services. Along with limitations on overall email storage capability, Exchange 5.5 is no longer supported by Microsoft (support continues to be available through other sources). Because of the storage limitations, we have been forced to limit mailboxes to 100 megabytes (not enforcing the limitation can, and has caused the server to crash, creating outages and disrupting communications). Moving away from Exchange 5.5 will relieve the size constraints/crashing issue, will put us in compliance with Microsoft's supported platforms, and will strengthen the reliability of this mission critical application. Another benefit of Exchange 2003 is the capabilities in remote mail access which will be much like the client desktop version.

Active Directory

Microsoft Windows Server is the standard operating system platform for the City's servers. Of the twenty three servers the city has, two servers remain on the Windows NT Server platform. Windows NT Server is no longer supported by Microsoft (support continues to be available through other sources). The NT platform has been replaced with Windows Active Directory (AD) which is a central component of Windows 2000/2003 operating system platform. Active Directory is a complex, labor and time intensive project which will involve vendor professional services to implement. Active Directory service provides a place to store information about network-based entities, such as applications, files, printers, and people. It provides a consistent way to name, describe, locate, access, manage, and secure information about these individual resources. Active Directory will lower management costs by providing a single place to manage users, groups and network resources. For example, Active Directory uses one place for managing both Windows 2000 users and Microsoft Exchange mailbox information. AD simplifies user account management because it eliminates redundant tasks. When an employee gets married and changes names, a single change in Active Directory can change the user information for all applications and services. With AD, administrative tasks such as managing user accounts can be delegated to Information Systems interns without inappropriately providing full network access. Active Directory is also a prerequisite for Exchange Server 2003.

Email Redundancy

As previously mentioned, email has become the communication tool of choice for many. As a result, the stability of our email systems, as well as the service providers we choose to partner with, is critical to its success. We have recently completed a migration from our previous email hosting service provider who had on at least two occasions "lost" our records thereby causing the City's domain to be unrecognizable to the World Wide Web – i.e., emails could not be delivered to us. We are now partnered with a service that is stable, and provides their own redundancies to complement our own, thereby minimizing the possibility of lost emails.

The next step is to implement an email vault which will capture all incoming and outgoing emails and retain them within the parameters we set. In the event we have a server failure we will continue to have access to those emails. Additionally, an email vault will provide quick and easy end-user access and comprehensive search functionality to email archives. Integrated with Microsoft Exchange, the email vault further eliminates mailbox quotas, message size restrictions and gives users a mailbox of virtually unlimited size while simultaneously controlling message storage growth. The vault will be a high-scale, long–term repository for older information. Email server performance will improve and users will enjoy instant access to all email without the management of personal folders.

Finally, we are planning the implementation of a secondary backup email server which runs parallel to the primary server. In the event the primary server fails, the secondary server automatically activates with no loss of service. Previously, we had experienced a crash of our email server which resulted in I.S. staff needing to rebuild each user account manually. This event caused our email to be down for several days. If we had the backup server in place, the outage would not have occurred.

Network Security
One of our biggest on-going challenges is securing our network from intruders. Assaults from hackers, spam, viruses, spyware and spoofing require our constant attention. As a result, this item remains a top priority each year. Subtasks we have planned include improved firewall security, implementation of smaller virtual networks to limit access if penetration is accomplished, improved intrusion detection which alerts us to attempted entrance (and highlights potential weaknesses on which we then focus), improved spam protection and security assessment/audit.

Disaster Recovery/Business Continuity
One particularly important project I.S. has been working on is disaster recovery and business continuity. Recent catastrophes in New Orleans and the Gulf Coast region remind us of the importance of planning for the worst, not only for our emergency services, but for our information systems. With our increasing reliance on technology, our ability to continue operating in the aftermath of a disaster, or other cause of network interruption, is critical. Towards this end, we have recently initiated an agreement with our financial systems provider (Eden) whereby our financial systems data will be replicated daily to an offsite location in Washington state. In the event of failure of our onsite network, we will be able to continue processing remotely utilizing our data on their servers via Internet. We expect this program to be in place in the next 2-3 months. This is just one example of continuity planning. Our goal is to provide similar redundancy for all mission critical systems so that the business of local government can continue despite certain challenges.

Police & Fire Relocation
The opening of the new joint public safety facility requires planning for the technology to be installed. I.S. has worked with the architects and using departments to lay out the requirements, which now must be implemented with the anticipated completion of the facility. Scheduled workstation replacements for public safety were put on hold as to time deployment of these systems with the relocation into the new facility. Information Systems will deploy over thirty new workstations in the facility as well as install and

configure new network routers and switches. This will involve coordination and connectivity with the Sheriff's data network and our emergency dispatch center (RCC).

These important projects listed above are in addition to the usual on-going tasks:

* ❖ **Server and workstation replacements**. 25% of the workstations (approximately 60) are replaced each year which requires a technician to configure, install and test the unit at each location. Servers are also replaced which are more complicated in setup and configuration.
* ❖ **Upgrades to the various applications which require I.S. support**. Information Systems maintains new programs and database updates for specific departmental applications such as finance (Eden), Public Works Fleet Management (RTA), Community Development Accela Permits' Plus, Parks and Recreation Class and Human Resources Applicant Management System. For example, typically, the finance system receives 3-4 upgrades/releases per year which need to be installed to stay current. A list of all of the systems I.S. supports is included as Attachment "A."
* ❖ **Systems maintenance**. It is essential that Information Systems keep all Microsoft Windows Operating Systems and Office applications up-to-date with new releases of service packs, security updates and patches on twenty-three servers. Furthermore I.S. has to meet the Storage Area Network support agreement by keeping our program and firmware up-to-date. Much of this work is performed after hours in order to minimize disruption to staff and the public.
* ❖ **Help Desk**. The Information Systems Division operates a Help Desk which provides a centralized location for using departments to report system problems and to request I.S. assistance. All I.S. staff answers the phones and respond to emails for assistance. In the year 2004, the Help Desk responded to over 4,200 calls for service. Additionally, extended support is provided on Tuesday evenings until 8pm to cover any system issues that may arise during the first 90 minutes of the Council meetings (this also allows IS to perform support and upgrade activities after normal business hours minimizing work flow disruption). On-going support is a mission critical service in ensuring the continued functionality and operability of technology in the City.

* ❖ **Training**. Technology changes rapidly and keeping up with those changes requires our staff be trained and stay abreast of the issues. Training comes in the form of attending seminars, vendor exhibitions, conferences, symposiums, user group meetings and technology association gatherings. Additionally, our IS staff often attend conferences sponsored by the companies that have developed and implemented our mission critical systems including our financial, building permit and class registration systems. This provides them with an understanding of the technology behind the systems and makes them more effective in their support roles.

Primary support for our network is provided by the Network Administrators. The addition of an Information Systems Specialist will allow the Network Administrators to better focus on preventative maintenance, monitor network infrastructure and applications, and more proactively plan and execute projects in a timely manner. Applications that are critical to business operations 24/7 include:

* Electronic mail and remote mail (Outlook Web Access)
* Network printing
* Fire - Records Management System (RMS), data transmission from RCC

- Parks and Recreation - Dial-A-Ride
- PD – Records Management (Tiburon), and constant connectivity to L.A. County Sheriff data network
- Public Works – water system (SCADA)

I.S. plays an important role with all technologies used by the City. In fact, established protocols require that all technologies to be implemented must first be reviewed and approved by Information Systems. This ensures that compatibility with existing systems is maintained, technology is implemented in a deliberate manner, and that I.S. is capable of supporting the technology. This structure helps us control technology growth, which if not monitored can quickly get out of control.

While Information Systems is not always the responsible administering department for all technologies, the implementation and support of almost all technology applications rests with Information Systems. For example, the Community Development department administers the use of the building permitting system – Accela. However, all of the "back office" support for this application belongs to I.S. As a result, responsibility for server maintenance, scheduled replacements, client based (e.g. workstation) software loads, etc. belongs to I.S. This is true with all of the computerized applications within the City. For a complete list of applications, please see Attachment "A."

In addition to departmental specific applications and network wide systems, Information Systems is responsible for:

- ❖ Office applications (Word, Excel, PowerPoint, Access)
- ❖ Email and email borne threats such as spam, virus protection/eradication, fishing, etc.
- ❖ Website
- ❖ Workstation support
- ❖ Data network and Telco infrastructure
- ❖ Fiber optics
- ❖ Intrusion Detection
- ❖ Streaming video
- ❖ City's Intranet

Further to the larger projects discussed in detail above, I.S. has many smaller, but important projects (in conjunction with the using departments) that add to the workload. These include:

- ❖ Virtual LAN implementation for each department (Security)
- ❖ Cisco port security
- ❖ Water web installation and testing
- ❖ SCADA Water System (Review hardware and software support/purchase new hardware, acquire network diagrams)
- ❖ Intrusion Detection System Upgrade
- ❖ False alarm monitoring systems software
- ❖ Parks and Recreation payment processing upgrade
- ❖ GIS workstation upgrade - need to migrate data to new workstation
- ❖ I.S. policies & procedures
- ❖ E-mail retention policy (review with Council)
- ❖ Security training
- ❖ Business license software

- ❖ Fixed assets software
- ❖ Remote File Access (Caymas) Upgrade
- ❖ Layered Anti-spam solution
- ❖ Network scanning/printing/faxing Solutions
- ❖ SQL 2000 Upgrade for Finance system server
- ❖ Eden software upgrade
- ❖ Veritas Backup Exec 10.x Upgrade
- ❖ Backup solution for servers in the secure zone
- ❖ Storage Area Network Upgrade
- ❖ Additional Tape Library
- ❖ Liberty Document Imaging System upgrade (Q4 – October 2005)
- ❖ Training/Conferences
- ❖ UPS Monitoring Solution
- ❖ Adobe Upgrade/Additional Licenses
- ❖ Managed / Dedicated Web Hosting
- ❖ Symantec Client Security Deployment (Q4 2005)
- ❖ Software inventory/organization - expand inventory table to include location

Position Requested

Council will recall that during the FY 2005-2006 budget deliberations, staff discussed the needs for additional positions citywide. While we did not make any recommendations at that time, we have since concluded that the need for an added Information Systems position supercedes our other needs, and is required as soon as possible due to the workload and projects discussed above, and the realization that technology needs will only grow and will need to be supported. As a result, we are recommending the addition of an Information Systems Specialist. This is an existing classification (with no incumbents) with a salary range of $4319 to $5512 per month. Including benefits, we estimate the cost of the position to be $79,609 per year. The cost of an additional Information Systems position is spread across all using departments, and paid from the Information Systems Fund.

If approved, it will take approximately 3 months to recruit and place the position. Having the person on board in that time frame will allow us to handle the existing workload while keeping a steady pace on the important projects (website, email, security, spam, etc.).

Staff recognizes that an alternative to hiring our own staff is to contract out for that support. While we do exactly that for a number of specialized skills required to support the network, we do not recommend that arrangement for our core support team. These positions have daily interaction with city staff and with residents who may be having problems accessing the City's website or email. As a result familiarity with our protocols and customer service standards are important, which is something that may not always occur with individuals who are employed elsewhere or whose faces change frequently. Additionally, all of our full time IS staff must pass a thorough background because of access to sensitive/confidential network data. The expense and time to perform this research on a contractor may not be practical, especially if there is no control over the personnel assigned to the City for these duties.

CONCLUSION:

Each and every department is reliant upon computer systems to perform their daily activities. From monitoring of our water systems and issuing building permits, to registering participants in classes and issuing water bills, technology is becoming the basis of nearly all that we do. The City has made, and continues to make, substantial investments in technology. While we had only a few mission critical

systems and very few servers when we first implemented the network ten years ago, we now have grown to 115 independent software applications (see Attachment A), 23 servers, and 300 workstations and peripherals, yet are operating with the same basic staffing levels we have had in place for over five years. Clearly, these systems require knowledgeable, trained staff to administer the technologies that ultimately support the City's goals and missions. Moving forward, there will undoubtedly be increased demand for such support and the necessary staff to provide it, without which we will not be successful in maximizing our technology investments. As a result, we are recommending the addition of an information systems specialist.

Attachments: A.   List of Citywide applications

Agenda Item #: _____

Attachment A
List of Citywide Applications

	DEPARTMENT	VENDOR	APPLICATION
1	All Departments	Adobe	Acrobat Writer
2	All Departments	Ahead	Nero
3	All Departments	Microsoft	Microsoft Back Office
4	All Departments	Microsoft	Microsoft Exchange
5	All Departments	Microsoft	Microsoft FrontPage
6	All Departments	Microsoft	Microsoft Office
7	All Departments	Microsoft	Microsoft Project
8	All Departments	Microsoft	Microsoft Proxy
9	All Departments	Microsoft	Microsoft Server
10	All Departments	Microsoft	Microsoft SQL
11	All Departments	Microsoft	Microsoft Team Manager
12	All Departments	Microsoft	Microsoft Windows
13	All Departments	Symantec	SMS
14	All Departments	Symantec	Antivirus
15	All Departments	Symantec	Client Security
16	All Departments	Veritas	Backup Exec
17	All Departments	WinZip	WinZip
18	Community Dev.	Accela	Accela Permits Plus
19	Community Dev.	ESRI	ArcView
20	Community Dev.	First American Real Estate Solutions	WIN 2 DataDisc
21	Community Dev.	Sierra	Sierra Permits Plus
22	Finance	Avt	Call Xpress
23	Finance	Business Objects	Crystal Reports
24	Finance	Neptune Reading System	Meter Reading
25	Finance	Diversified Sys Resources	Expedite Manager
26	Finance	Duncan	CashKey System
27	Finance	Tyler Systems	Eden Gold
28	Finance	Informix	Informix RDBMS
29	Finance	Mitel	Lightware 30
30	Finance	MMI	Financials - PICK system
31	Finance	Phoenix Group	DMV
32	Finance	Quadrant Systems, Inc.	QSI Receipt Accounting System
33	Finance	Quark	Quark Xpress
34	Finance	SCO	UNIX
35	Finance	Sigma Communications	Reverse 911
36	Finance	Symantec	PC Anywhere
37	Finance	Sympro	Investment Portfolio Manager
38	Finance	TTI	Wincall Call Accounting
39	Finance	Union Bank of California	Clear Image Check Imaging
40	Finance	Wordtech	DBXL
41	Finance	WRQ	Reflections
42	Finance	Symantec	Win Fax Pro

	DEPARTMENT	VENDOR	APPLICATION
43	Finance		WinteGrate
44	Fire	JASC	Paint Shop Pro
45	Fire	RCC	Radio System
46	Fire	RCC/PRC	PRC Computer Aided Dispatch
47	Fire	SunPro	SunPro Inc
48	Human Resources	Tyler Systems	Human Resource System
49	Human Resources	IQ Objects	IQ Objects
50	Human Resources	Keller's Testing Systems	Alcohol and Drug Testing
51	Human Resources	OPAC	OPAC Testing Software
52	Information System	Dameware	Dameware
53	Information System	JASC	Paint Shop Pro
54	Information System	Macromedia	Dreamweaver
55	Information System	Microsoft	Microsoft Viso
56	Information System	Raining Data	Pick
57	Information System	ScanSoft	Omni Page Pro
58	Information System	Symantec	Ghost
59	Information System	Symantec	Manhunt
60	Information System	Symantec	Intrusion Detection System
61	Information System	Symantec	Event Collector
62	Information System	Symantec	SESA
63	Management Services	Book Publishing Company	CodeMaster for Windows
64	Management Services	Calendar Creator	Calendar Creator Plus
65	Management Services	Excalibur	Document Imaging
66	Management Services	Liberty	Document Management
67	Management Services	Sun Systems	Solaris (Document Imaging)
68	Management Services	West Publishing	Legal Solutions Plus
69	Parks & Recreation	Adobe	Illustrator
70	Parks & Recreation	Adobe	PageMaker
71	Parks & Recreation	Adobe	Photo Elements
72	Parks & Recreation	Adobe	Photoshop
73	Parks & Recreation	Adobe	Streamline
74	Parks & Recreation	Adobe	Type Manager
75	Parks & Recreation	Aldus	PageMaker
76	Parks & Recreation	Apple	Virtual PC (MAC)
77	Parks & Recreation	Active	Class Registration System
78	Parks & Recreation	Extensis	SmartScale
79	Parks & Recreation	Markzware	Flight Check
80	Parks & Recreation	Quark	Quark Xpress
81	Police	Arcview	GIS
82	Police	Business Objects	Crystal Reports
83	Police	Connx	Connx
84	Police	Copware	Zax Electronic Publications
85	Police	Digital Equipment Corp	Open VMS Records Mgmt.
86	Police	Eden & Ney Associates	KATS 20 (K9 traking System)
	DEPARTMENT	VENDOR	APPLICATION

87	Police	Enforcement Technology	AutoCite Parking Citations
88	Police	ESRI	Crimeview
89	Police	ESRI	ArcView
90	Police	Imageware	C.R.I.M.E.S. Composite Program
91	Police	InterQuest	Faces
92	Police	Inventory Trackers	WinET Evidence Tracking
93	Police	JASC	Paint Shop Pro
94	Police	Laplink	Laplink
95	Police	LASO	JDIC
96	Police	Matthew Bender	Authority
97	Police	National Insurance Bureau	VINedit
98	Police	Omega Group	Crimeview
99	Police	Quark	Quark Xpress
100	Police	RCC	Radio System
101	Police	RCC	Computer Aided Dispatch System
102	Police	ScanSoft	Omni Page Pro
103	Police	Symantec	PC Anywhere
104	Police	Tiburon Systems	Records Management System
105	Police	WRQ	Reflections
106	Public Works	Adobe	Creative Suite 2
107	Public Works	Autodesk Corporation	AutoCAD
108	Public Works	Best Lock Corporation	Best Key and Core Control
109	Public Works	Business Objects	Crystal Reports
110	Public Works	CarteGraph	SignView, MapDirector
111	Public Works	ESRI	GIS - ArcView
112	Public Works	ESRI	ArcIMS
113	Public Works	ESRI	MapObjects IMS
114	Public Works	ESRI	ArcExplorer
115	Public Works	ESRI	ArcInfo
116	Public Works	Gate	PW Yard Gate Opening
117	Public Works	GE Team Controls	SCADA
118	Public Works	HP	MyCD
119	Public Works	Microsoft	Visual Basic
120	Public Works	Palm O.S.	Palm O.S.
121	Public Works	Procom	Procom
122	Public Works	Rainbird	Rainbird Irrigation
123	Public Works	Raypack International	RNI 2000 Fuel Management
124	Public Works	Ron Turley Associates	RTA Fleet Management
125	Public Works	SitePRo	HVAC
126	Public Works	Stantec	Pavement Management System
127	Public Works	Symantec	PC Anywhere
128	Public Works	Tremco	TRIM Roof Management
129	Public Works	Trimble	Pathfinder Office (GPS)