

Honorable Mayor and Members
of the City Council
City Hall
Torrance, California

Members of the City Council:

SUBJECT: Communications & Information Technology – Approve storage and backup requisition, appropriate funds, and authorize increase to purchase order for data storage capacity.

Expenditure: \$28,891.99

RECOMMENDATION

Recommendation of the Information Technology Director that City Council:

- 1) Approve the Data Disk Storage and Backup Expansion capital project;
- 2) Appropriate \$28,891.99 from the PC replacement fund to the project; and
- 3) Authorize a \$25,280.49 increase to existing Dell Marketing L.P. purchase order #2012-23 for a new not-to-exceed total of \$60,280.49 to purchase equipment for the expansion of centralized data storage capacity by 16 terabytes to meet the City's growing storage needs.

Funding

Funding is available in the PC replacement fund balance.

BACKGROUND

The City currently stores approximately six terabytes of data on all of its Dell servers with 1.34 terabytes on its file servers. For perspective, one terabyte can hold 1,000 copies of the Encyclopedia Britannica. Data includes application databases, web pages, scanned documents, office documents (word, excel, power point, databases), photos, videos, online forms, etc. The City has been collecting electronic data for approximately 22 years since it first implemented personal computer use in 1989. In 2007 the City's file servers had .45 terabytes of data. In 2011, the City has 1.34 terabytes, a 300% increase in four years. The usage rate of data storage is increasing as more data is stored in electronic format with paperless (green) initiatives. The City is in need of additional enterprise data storage space to retain data generated by departmental operations.

In addition to storing electronic data, the City backs up the data and sends it offsite for disaster recovery. Currently, data backups are made to magnetic tapes before they are sent offsite for storage. The time to complete tape backups ranges from approximately two to 23 hours. Full

backups that run over ten hours have been moved to weekend schedules. As data volumes grow, the backup window is reduced as backup run time and completion gets closer to the start of the next business day. The data backup system needs to be enhanced so backups are finished before the next business day.

The Data Disk Storage and Backup Expansion project will require the implementation of three Dell Quad Core Intel Xeon E5620 base units with Windows Storage Server 2008 operating systems. Dell equipment is preferred for the project in order to remain compatible with existing equipment as this is an expansion of the current system. The computer equipment will be added to the CIT computer replacement program at a seven-year replacement cycle.

ANALYSIS

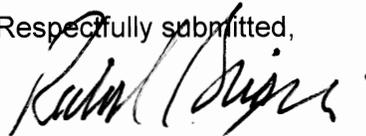
Data storage space is a limited resource. Once data storage is full, new documents or data cannot be saved unless existing data is removed. Departments will be impacted as they produce new documents and want to store additional data. Departmental resources will be diverted to review existing data and archive or delete data. DVD archiving is feasible but is labor intensive. Additional centralized storage is a lower-cost alternative.

A Request for Quotation (RFQ) was sent to six known vendors and the City received two quotes for the Data Disk Storage and Backup Expansion equipment. Dell Marketing L.P. submitted the lowest responsible quote for this equipment. Pricing includes a five-year warranty, delivery to Torrance, and sales tax.

| Vendor | Equipment Total |
|--|-----------------|
| Dell Marketing L.P. 1 Dell Way Round Rock, TX 78664 | \$25,280.49 |
| San Direct 3400 International Airport Dr., Suite 1000 Charlotte, NC 28208 | \$26,236.00 |

The total equipment cost is \$25,280.49. The replacement cost for the first year of the seven-year replacement cycle is \$3,611.50. The total project cost including the first-year replacement cost is \$28,891.99.

Respectfully submitted,



RICHARD SHIGAKI
Information Technology Director

CONCUR:



LeRoy J. Jackson
City Manager

Attachment A) Capital Requisition #265

**Request #: 2011-00265 Facilities, Equipment, Automation Project
(FEAP)**

| | |
|----------------------------------|--|
| Type of Project | Automation |
| Project Location | City Hall Data Center |
| Project Title | Data Disk Storage and Backup expansion |
| Submitting Department | CIT - Info Technology |
| Prepared By | LEE, RYAN M. |
| Preparer's Email | ree@torranceca.gov |
| Managing Department | CIT - Info Technology |
| Project Leader | LEE, RYAN M. |
| Project Leader's Email | ree@torranceca.gov |
| Project Start Date | 07/01/2011 |
| Estimated Completion Date | 12/30/2011 |
| Project Request Status | Proposed |
| Approved Project Status | |

Description

Expand centralized enterprise data storage capacity by 16 terabytes to meet growing storage needs including green and paperless initiatives. Enhance data backup system using hard disks to support additional capacity and to speed run time allowing back ups to finish before the next business day.

Justification

The City currently stores approximately (6) terabytes of data on all of its servers with 1.34 terabytes on its file servers. For perspective one (1) terabyte can hold 1,000 copies of the Encyclopedia Britannica. Data includes application databases, web pages, scanned documents, office documents (word, excel, powerpoint, databases), photos, videos, online forms, etc. The City has been collecting electronic data for approximately 22 years since it first implemented personal computers in 1989. In 2007 the City's file servers had .45 terabytes of data and has grown to 1.34 terabytes in 2011, a 300% increase in 4 years. The usage rate of data storage is increasing as more data is stored in electronic format with paperless (green) initiatives.

In addition to storing electronic data the City backs up the data and sends it offsite for disaster recovery. Currently data backups are made to magnetic tapes before they are sent offsite for storage. Tape back ups range from approximately 2 hours to 23 hours to complete. Full back ups that run over 10 hours have been moved to weekend schedules. As data volumes grow, the backup window is reduced as back up run time and completion gets closer to the start of the next business day.

The City is in need of additional enterprise data storage space to retain data generated by departmental operations and to back up data for disaster recovery.

Impact of Non-Approval

Data Storage space is a limited resource. Once data storage is full new documents or data can not be saved unless existing data is removed. Departments will be impacted as they produce new documents and want to store additional data. Departmental resources will be diverted to review existing data and archive or delete data. DVD archiving is feasible but it is labor intensive. Additional centralized storage is a lower cost alternative.

Other Alternatives Considered

Limits can be placed on storage capacity for each account requiring each account to review data as they approach the storage limit. Older data can be archived to DVD. DVD creation, indexing, and retrieve is labor intensive. Additional centralized storage is a lower cost alternative.

Project Cost

Estimated project Implementation Cost (ONE TIME COSTS)

| | Within Department | Support Department | Comments |
|--|-------------------|--------------------|------------------------------------|
| Personnel Requirements | | | |
| # of positions | _____ | _____ | |
| Labor costs (Comp Detail Report-Total) | _____ | _____ | |
| Date of Comp Detail Report _____ | | | |
| Equipment | \$30,000 | _____ | |
| Materials | _____ | _____ | |
| Professional Services/Contracts | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Total | \$30,000 | \$0 | Grand Total <u>\$30,000</u> |

Estimated Annual Ongoing Operating and Maintenance Costs (UPON PROJECT COMPLETION/IMPLEMENTATION)

Not Applicable

| | Within Department | Support Department | Comments |
|---|-------------------|--------------------|---|
| Additional Personnel Requirements | | | Annual replacement costs over a 7 year useful life. |
| # of positions | _____ | _____ | |
| Annual Labor costs (Comp Detail Report-Total) | _____ | _____ | |
| Date of Comp Detail Report _____ | | | |
| Equipment | \$4,300 | _____ | |
| Materials | _____ | _____ | |
| Professional Services/Contracts | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Other _____ | _____ | _____ | |
| Total | \$4,300 | \$0 | Grand Total <u>\$4,300</u> |

Department Priority

Recommendation

Recommendation Last Changed

Operator

Date/Time

Project Timeline**Original Timeline**

Created By: LEE, RYAN M.

Created Date: 3/4/2011 4:36:25 PM

| Description | 2011-12 | | | | |
|-----------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Survey/Design | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Plans/Specification | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Purchase/Construction | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Financing Source - Details

| Original Budget | | Created By: LEE, RYAN M. | | | | | |
|-------------------------|-----------------------------------|-----------------------------------|----------------|----------------|----------------|----------------|--------------|
| Amount: \$30,000 | | Created Date: 3/4/2011 4:36:25 PM | | | | | |
| Financing Source | Council Approved Date/Time | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | Total |
| To Be Determined | | \$30,000 | | | | | \$30,000 |
| Sub-Total: | | \$30,000 | \$0 | \$0 | \$0 | \$0 | \$30,000 |

Financing Source Options**Original Budget**

Created By: LEE, RYAN M.

Total Amount: \$30,000**Total Percentage: 100%**

Created Date: 3/8/2011 10:45:02 AM

| Financing Source | Percent | Amount |
|-------------------------|----------------|---------------|
| PC Replacement Fund | 100% | \$30,000 |

Financing Source - Summary

Project Budget By Funds (Excluding Ongoing cost)

Total Project Cost: \$30,000

| Financing Source | Life to Date Appropriation | Total Amount |
|------------------|----------------------------|--------------|
| To Be Determined | \$30,000 | \$30,000 |
| Grand Total: | \$30,000 | \$30,000 |

By Sources/By Fiscal Year (Excluding Ongoing cost)

Total Project Cost: \$30,000

| Financing Source | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | Total |
|------------------|----------|---------|---------|---------|---------|----------|
| To Be Determined | \$30,000 | | | | | \$30,000 |
| Sub-Total: | \$30,000 | \$0 | \$0 | \$0 | \$0 | \$30,000 |

Original Budget Amount: \$30,000

Created By: LEE, RYAN M.
Created Date: 3/4/2011 4:36:25 PM

| Financing Source | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | Total |
|------------------|----------|---------|---------|---------|---------|----------|
| To Be Determined | \$30,000 | | | | | \$30,000 |
| Sub-Total: | \$30,000 | \$0 | \$0 | \$0 | \$0 | \$30,000 |

Budget vs. Expenses

Last Payroll Update

Budget As Of

Expenses

| | |
|----------------------------------|-------|
| Life To Date Budget - Posted | _____ |
| Life To Date Budget - Unposted | _____ |
| Total Life To Date Budget Actual | _____ |
| Encumbrances | _____ |
| Unposted Transaction | _____ |
| Available Budget | _____ |

Revenue

| | |
|----------------------------------|-------|
| Life To Date Budget - Posted | _____ |
| Life To Date Budget - Unposted | _____ |
| Total Life To Date Budget Actual | _____ |
| Unposted Transaction | _____ |
| Available Budget | _____ |