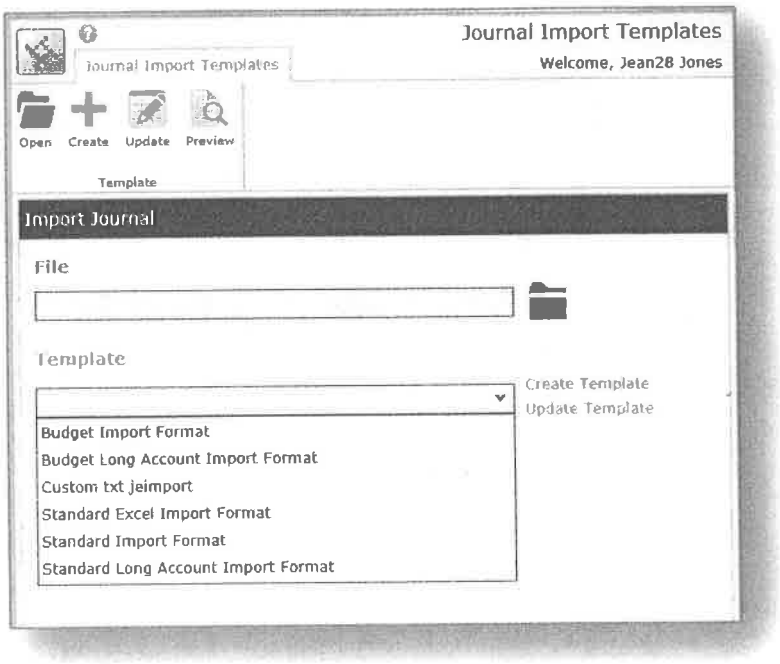
Munis General Ledger: Journal Import Template

Tyler's Munis Enterprise Resource Planning software has been designed as an integrated solution with multiple capabilities to interface with, as well as import and export information to and from, third-party components. In this document we'll talk specifically about the import/export capabilities.

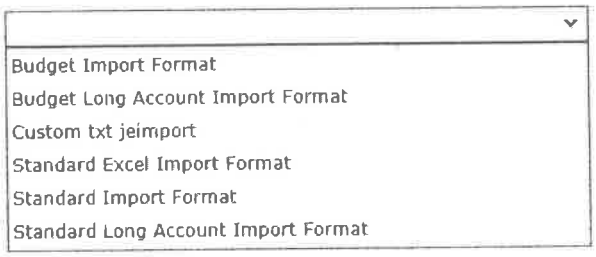
Journal Import Template

Using the *Journal Import Template* program, users can create new journals using data from either an ASCII or Excel file. Journal Import Templates (formats) can be created and saved for future use, and existing formats can be copied and edited allowing for user modification of existing templates. Once done, users simply run the General Journal Entry program to update and/or poof/post these journals.



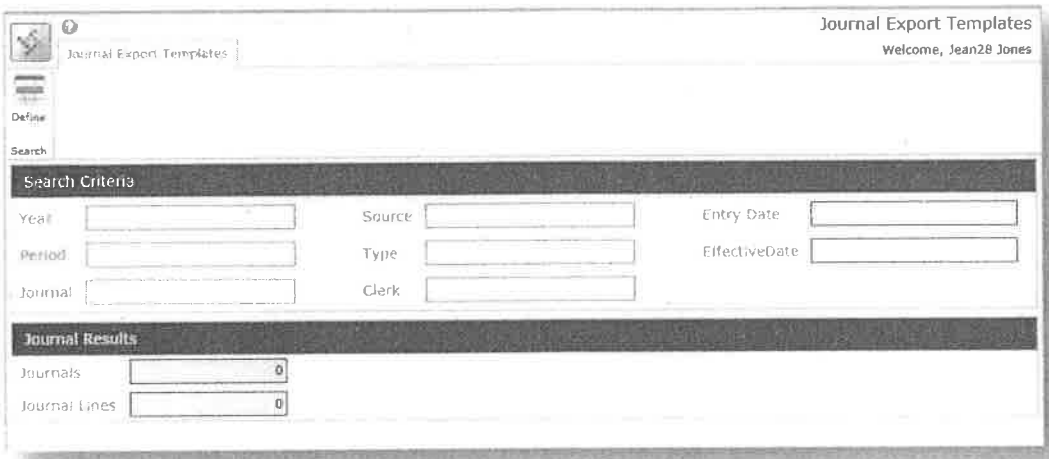
Predefined Report Templates

For ease of use, Tyler provides several predefined templates for Munis import. These include the following:



Journal Export Template

The Munis **Journal Export** program creates export files in either an ASCII or Excel file. As with imports, Journal Export Templates (formats) also can be created and saved for future use, and existing formats can be copied and edited allowing for user modification of existing templates.



Appendix of Other Integration/Import/Export Points

Below is a list of additional points of integration/interfacing from within Munis, addressed in a general way and not as vendor specific. This list comprises a sample of available solutions, and does not constitute the entire list of options that may be available and/or possible.

Most Common Integration Points

Below is an overview, by module, of the most common standard Munis import and export file layouts. These are provided to our clients out-of-the-box, and are generally accepted by leading third-party providers most often used by Munis ERP users.

Entity	Direction	Fixed Length File-Based Option	XMLFile-Based Option	Web Service Option
Accounts Payable & Purchasing				
AP Invoice Import	Import	•		
P-Card Import	Import	•		
Requisition Import	Import	•	•	
Vendor Import	Import		•	
Accounts Receivable & General Billing				
Miscellaneous Payments Import	Import	•		•
Payment Import	Import	•		
GB Invoice Import	Import	•		•
Central Property				
Property/Address Import	Import	•		•
General Ledger				
Journals	Import	•	•	•
Journals	Export	•		
Payroll/HR				
New Hire Import	Import	•		
Time Entry	Import	•		
Position	Import	•		
Personnel Actions	Export	•	•	

• - Indicates option is provided ★ - indicates option is provided in select states and/or select situations

For each standard interface, Tyler requires customers to have an active support agreement with the third party system and for the customer to be on a current version actively supported by the manufacturer/developer of the product installed.

Descriptions of Most Common Integration Points

Accounts Payable and Purchasing

Active Card Integration
This integration allows users to pay vendors without processing paper checks. By flagging to-be-paid accounts payable invoices in Munis, Active Card integration reduces a site's paper check needs and may allow them to pay their bank up to 30 days beyond the invoice due date based on their particular card program's cycle date. To use ACI, sites need to work with a bank/credit card company that uses the Works™ Fast*TRACK*™ payment processing system.

AP Invoice Import
This integration point allows payments that were generated in third party systems to be imported into Munis so checks can be generated from the Munis Accounts Payable module. This integration supports site definable file layouts so sites can define their own custom layouts per third party requirements. AP Invoice Import also supports payments to one-time pay vendors to reimburse non-vendor entities.

P-Card Import
This integration point allows p-card transactions to be imported from a bank's credit card system. Once imported the transactions can be routed to the individual p-card holders where an end user can attach receipts, allocate to multiple GL Accounts, and do other necessary maintenance prior to routing for approvals. Once completed the p-card transaction will be reflected on the vendor's purchasing history of where the purchase took place.

Requisition Import
This integration point allows requisitions to be imported from third party systems. Imported requisitions can either be for warehouse requests to deliver inventory or for the direct purchase of items. Once imported, the requisition will behave as any other natively entered Munis requisition.

Vendor Import
This integration point allows vendors to be imported from third party systems. The primary purpose of this is for the synchronization of vendors between Munis and third party systems.

Accounts Receivable and General Billing

Credit Card Processing – Tyler Cashiering
Tyler Cashiering has the capability to interact with a variety of external systems, typically evaluated on a case-by-case basis. In short, this interface is configured to retrieve billing information details (such as due amounts and charges) from various billing sources. Integration with Munis modules comes standard. Currently the application allows for a number of 3rd-party Credit Card processing companies:
PayPal's PayFlow Pro
CyberSource's Simple Order API
Payment Processing Inc (PPI)

Miscellaneous Payments Import

This integration point provides the ability to import miscellaneous payments that have been collected outside of Munis for posting to the Munis General Ledger. The miscellaneous import file must be formatted as defined in the provided layout. The produced file is then processed into Munis through Miscellaneous Payment Import by selecting the produced file as the import file. Flat file and web service options exist.

Payment Import (Lockbox)
This integration point provides the ability to import a large number of payments received from a bank or other external agency. A bank or other external agency will format their payment information into the specified file format layout. When the file is received, the lockbox file will be processed into Munis through the Lockbox Processing program. The lockbox layouts provide for payments for properties or specific bills of any category. The lockbox file must be formatted as defined in the provided layouts. NACHA layout supported.

GB Invoice Import
This integration point provides the ability to import a large number of General Billing invoices produced external to Munis. The process that produces this set of invoices must format the data in the specified file format. The produced file is then processed into Munis through Invoice Import by selecting the produced file as the import file. Flat file and web service options exist.

Central Property
Property/Address Import
This integration point provides the ability to import a large number of property and/or address information from an external source such as GIS or CAMA. The external source will format their property updates into the specified file format layout. Flat file and web service options exist. The Standard Property Import which allows creation/update/inactivation of Properties which includes information such as ownership (customer), primary location (address), setbacks, buildings, and more. When the file is received, it will be processed into Munis through the Property Import program. The Central Property web service allows for periodic real-time update/creation/inactivation of properties and related sub-addresses.

General Ledger
Journal Import
This integration point provides the ability to import journals that impact the General Ledger. It is most used to import transactions from third party products or during the implementation of Munis when a client has gone live on Financials but is not yet live on other Munis modules. Standard flat file and Excel formats exist, both of which can be scheduled to run on a regular interval. There is also the ability to create user defined formats for both flat files and Excel files. A web service option also exists.

Journal Export
This integration point provides the ability to export journals that have been posted to the General Ledger. This interface is most commonly used to export transactions to other products or reporting tools. Standard flat file and Excel formats exist and also the ability to create user defined formats for both flat files and Excel files.

Payroll/HR

Insurance Deduction Import

Munis Payroll programs currently import insurance deduction information so users can set up and maintain Health and Life Insurance Deductions.

New Hire Import

The New Hire Import is used to create New Hire Personnel Action records within the Munis Human Resources module. This import is used when a third party application is used to gather qualified applicants where the hiring decision has already been made. This is especially helpful in certain states that host their own employment opportunities/applicant tracking solution and there is a desire to minimize the hand keying of information. The import is a flat file import that can be customized based on the file layout.

Time Entry Import

The Time Entry Import is designed to offer a flexible and easily configurable tool that allows for import of employee time entry information. This program is often used to integrate with substitute tracking and time keeping software and allows the user to configure the import to define the columns to import and where they are located in the file. Our clients also can use this program to import time entry records from an excel spreadsheet.

Position Import

Position Control is an integral part of the Munis HR/Payroll solution. The ability to import position control records is particularly important when developing staffing scenarios and there is a desire to work through scenarios in excel or a third party application. The import works off of a form definition and can import delimited and fixed length flat files.

Personnel Actions Export

The Personnel Actions Export's primary integration is with TylerForms to produce a Personnel Action Form (PAF). This export is an XML output and TylerForms can take that data to produce a custom form based on our client's needs. The form is also archived to TCM eliminating the need for paper forms in many cases.

Tax

Mortgage Service Company Export

Munis has a service company relationship with every mortgage company, allowing municipalities to send property tax bills directly to a citizen's mortgage holder.

Utility Billing CIS

Handheld Meter File

Using this import uploads meter reading data from the site's handheld device, and updates the Munis Utility Billing CIS programs. These readings are used to generate a bill. A valid formatted handheld upload file is required for the import. Current supported file formats include but are not limited to: Alliant, Belfast, CMR-MAX, Hexagram, Itron MVRS, Ludlow, Neptune, Neptune-F, Neptune-W, Oakbluffs, Pentamation, Read-Usage, Rutland, Saco, Sandord-S, Sensus, Teldata, Teldata2, and Winslow.

Utility Billing Bank Billing Register/EFT program

Utility bill payments can be set up to be paid via electronic money transfers from a customer's bank account directly to the utility's designated bank account. The program creates an EFT report and separate ASCII files to send to the automated clearing house (ACH) and for AR Lockbox processing.

Work Orders, Fleet and Facilities

Fuel Usage Import

This program allows users to import fuel records from their fuel system into the Munis Work Orders, Fleet and Facilities application. Fuel data will be stored and meter readings will be updated through this process. Meter readings work in conjunction with preventative maintenance triggers to determine when a vehicle or piece of equipment is due for service. Current fuel systems supported include Fuelman, TRN85-Fuelman, FuelForce, Phoenix AFC, Phoenix SCC, Fuelmaster and Fuelmaster Plus.

Appendix: Full Listing of Integration Points

Below is a comprehensive listing of all relevant integration points currently available within the Munis ERP solution, by module. Each of the listed files is included in your Munis ERP solution, and are provided at no additional cost to you.

Entity	Direction	Fixed Length File-Based Option	XML File-Based Option	Web Service Option
Accounts Payable				
Invoice Import	Import	•		
Invoice Export	Export	•		
AP Checks	Export	•		
AP Checks	Import	•		
AP Checks – Bank Reconciliation	Export	•		
AP Checks – Positive Pay	Import	•		
P-Card Transactions	Import	•		
Direct deposit NACHA file format	Export	•		
Accounts Receivable				
Late Fee Import	Import	•		
Bill Refund Export	Export	•		
Bill Refund Check Import	Import	•		
Delinquent Letter/Balance Export	Export	•		
Miscellaneous Payments Import	Import	•		•
Payment Import	Import	•		
Payment Export	Export	•		
Zip Code Export/Import	Import /export	•		
Business Licenses				
Remittance Import	Import	•		
Renewals	Export	•	•	
License Certificates	Export	•	•	
Bills, Delinquent Notices and Non-filers	Export	•	•	
Budget				
Budget Projection	Import	•		
Fixed Asset				
Asset Inventory checking - for BMI Integration	Import	•		
Fixed Assets	Import	•	•	
Fixed Assets	Export	•		
General Billing				
GB Account Statements	Export	•	•	
GB Loans	Export	•	•	
GB Invoice Print	Export	•	•	

Entity	Direction	Fixed Length File-Based Option	XML File-Based Option	Web Service Option
GB Statement Prints	Export	•	•	
GB Invoice Import	Import	•		•
GB Incident Import (CAD)	Import	•		
General Ledger				
Journals	Import	•	•	•
Journals	Export	•		
Accounts	Import	• - Excel		
Human Resources		•		
Position Import	Import	•		
SSN Import	Import	•		
Employee assignments import	Import	•		
Dependent and Beneficiary import	Import	•		
Personnel Actions Forms	Export	•	•	
American Checked Background Checks	Import/ export		•	•
Humanex	Export	•		
Gallup import and real time test scoring integrations	Import/ export	•	•	•
Gallup interview results	Import	•		
Applicant XML Import	Import	•	•	
New Hire Import	Import	•		
Insurance premium table imports	Import	•		
Employee certifications	Import	•		
Employee evaluations	Import	•		
Employee credentials	Import	•		
NCLB - Employee Course taught by year import	Import	•		
834 Benefits File Export	Export	•		
User Defined Export – Payroll Contributions	Export	•		
JD Palatine Background Checks	Import/ export		•	•
Parking Ticket				
Parking Ticket Import	Import	•		
Request for owner	Export	•		
Payroll				
Employee Import	Import	• Excel	•	
Kronos WFC and TKC exports	Export	•		
Subfinder export	Export	•		
Employee Export	Export	• Excel		
eSchools Import	Import	•		
eSchools Export	Export	•		

Entity	Direction	Fixed Length File-Based Option	XML File-Based Option	Web Service Option
Time Entry Import	Import	•		
Direct deposit NACHA file format	Export	•		
Check direct deposit file export	Export	•	•	
Deduction benefit provider exports (70+ vendor specific formats)	Export	•		
Vendor invoice export from Payroll	Export	•		
Munis general billing invoices	Export	•		
Munis GL journal export creates proof journal entry	Export	•		
Accrual Import	Import	•		
Check reconciliation (100+ bank formats)	Import	•		
Check positive pays (100+ output formats)	Export	•		
End of Period exports (10 various vendor specific exports ranging from American General through Telestaff Accrual Export)	Export	•		
Government Reports (Disability Unemployment Reports, Quarterly 941 xml for Tylerforms, New Hire Report, GASB 45 Data Export)	Export	•		
User defined data export (used for benefit providers)	Export	•		
W-2 electronic file	Export	•		
1099-R electronic file	Export	•		
W-2C electronic file	Export	•		
Permits				
Bond Release	Export	•	•	
Permit Exports	Export	•	•	
Violation Notices	Export	•	•	
Permits/Code Enforcement				
Property Import	Import	•		•
Project Ledger				
Project Journal Lines	Import	• Excel		
Purchasing				
Requisitions	Import	•	•	
Contracts	Import	•	•	
State Reporting				
State Mandated Reporting	Export	Variable to meet state req's		
System				
User Export	Export	•	•	
User Import	Import	•	•	
Roles Export	Export	•	•	
Roles Import	Import	•	•	
Banks Import	Import	•		
Zip Code Import	Import	•		

Entity	Direction	Fixed Length File-Based Option	XML File-Based Option	Web Service Option
Alerts Export	Export			•
Workflow Pending Actions/Notifications	Export			•
Tax				
CAMA	Import	•	•	•
Service Companies	Import	•		
Service Companies	Export	•		
Special Assessments	Import	•		
DMV*	Import	•		
Bill File	Export	•	•	
Exemption/Credit	Import	•		
Depreciation Tables	Import	•		
Property Data	Export	•	•	
Delinquent Advertisement	Export	•		
Bidder/Bids	Import	•	•	
Abatements	Export	•		
Utility Billing				
Meter Reads	Import	•		
Charges	Import	•		
Bill File	Export	•	•	
Services	Import	•		
Meter Inventory	Import	•		
Delinquent Notice	Export	•	•	
Liens	Export	•		
Cut-Offs	Export	•		
Third Party Name/Address	Import	•		
Work Orders				
Fleet Fuel Import	Import	• Fixed Length: Fuelman, Fuel Force, Phoenix AFC, Phoenix SCC, Fuel Master, TRN85-Fuelman, Fuelmaster-Plus, Gasboy CFN		
WO Assets	Import	• Excel		
Work Order	Import	•		

I.1.8 Tyler Technologies' Munis ERP & EnerGov Solutions, Hardware Requirements & Installation Overview 2015

On-premises Server Requirements

Overview

The following includes server infrastructure required for use with Tyler's Munis ERP and EnerGov application suites. The primary metric in sizing server specifications is the number of estimated concurrent users of each system.

Tyler supports several server environment deployment types including high availability configurations, virtualized environments and dedicated testing environments; the following requirements are for a standard deployment. Unless otherwise noted, all specifications include non-production environments (e.g. Train and Test).

Hard disk space specifications include a combination of internal hard drives and SAN storage device for many servers. Storage requirements are included for each server for capacity planning purposes. A fiber controller is strongly recommended for dedicated database servers and virtualized environments connecting to the SAN device for performance and redundancy reasons; iSCSI is sufficient for all other servers. For larger SQL installations, configuring the TEMPDB files on dedicated solid state drives can significantly improve SQL performance. SQL Server Enterprise Edition is required for "at-rest" data encryption using Transparent Data Encryption (TDE).

Operating system, database and application software is included for reference only. Typically, it is the responsibility of our clients to properly license Microsoft software procure required hardware.

High Availability

Tyler supports a variety of high availability (HA) server configurations. Tyler's recommended configuration is a virtualized environment used in conjunction with replication products such as VMware Site Recovery Manager or Veeam Backup and Replication. For environments requiring multiple dedicated SQL Server servers, SQL Server AlwaysOn Availability Groups is recommended (note, AlwaysOn requires SQL Server Enterprise Edition). A hardware-based network load balance appliance is strongly recommended when using multiple application servers. Clients should contact Tyler Installation Services when considering these advanced configurations.

Tyler will work with every client to help determine the best configuration to meet their infrastructure needs, however it is typically the responsibility of the client (or their hardware vendor) to configure advanced HA environments.

Virtualization

Tyler Technologies supports VMware vSphere and Microsoft Hyper-V for virtualizing Windows servers. It is a requirement that a Storage Area Network (SAN) or RAID 10 direct attached storage must be used when configuring a virtualized solution and the system should be configured such that virtualized guests are given dedicated memory.

Most virtualized installations will require customized hardware configurations. Please contact your sales representative to be directed to the appropriate Tyler technical resource that will be able to assist in hardware selection.

Tyler Technologies currently does not offer any training or installation services for the VMware or Microsoft Hyper-V virtualization products.

Munis – Up to 100 Users / EnerGov – Up to 25 Users

The following outlines server infrastructure required for a Munis implementation sized up to 100 concurrent Munis users and 25 concurrent EnerGov users.

Server Function	Qty.	CPU (P)[1]	CPU (V)[2]	Memory	Storage	Software
Munis Application & Tyler Databases	1	(2) Intel quad core 2.0Ghz+	4 vCPUs	48GB	500GB to 1TB[3]	Windows Server 2012 R2 Standard SQL Server 2012 or 2014 Standard SharePoint 2013 Foundation
EnerGov Application	1	(1) Intel quad core 2.0Ghz +	4 vCPUs	24GB	100GB	Windows Server 2012 R2 Standard
Content Management	1	(1) Intel quad core 2.0Ghz+	4 vCPUs	24GB	300GB	Windows Server 2012 R2 Standard
External Web	1	(1) Intel quad core 2.0Ghz+	2 vCPUs	16GB	100GB	Windows Server 2012 R2 Standard

[1] CPU configuration for physical configuration.

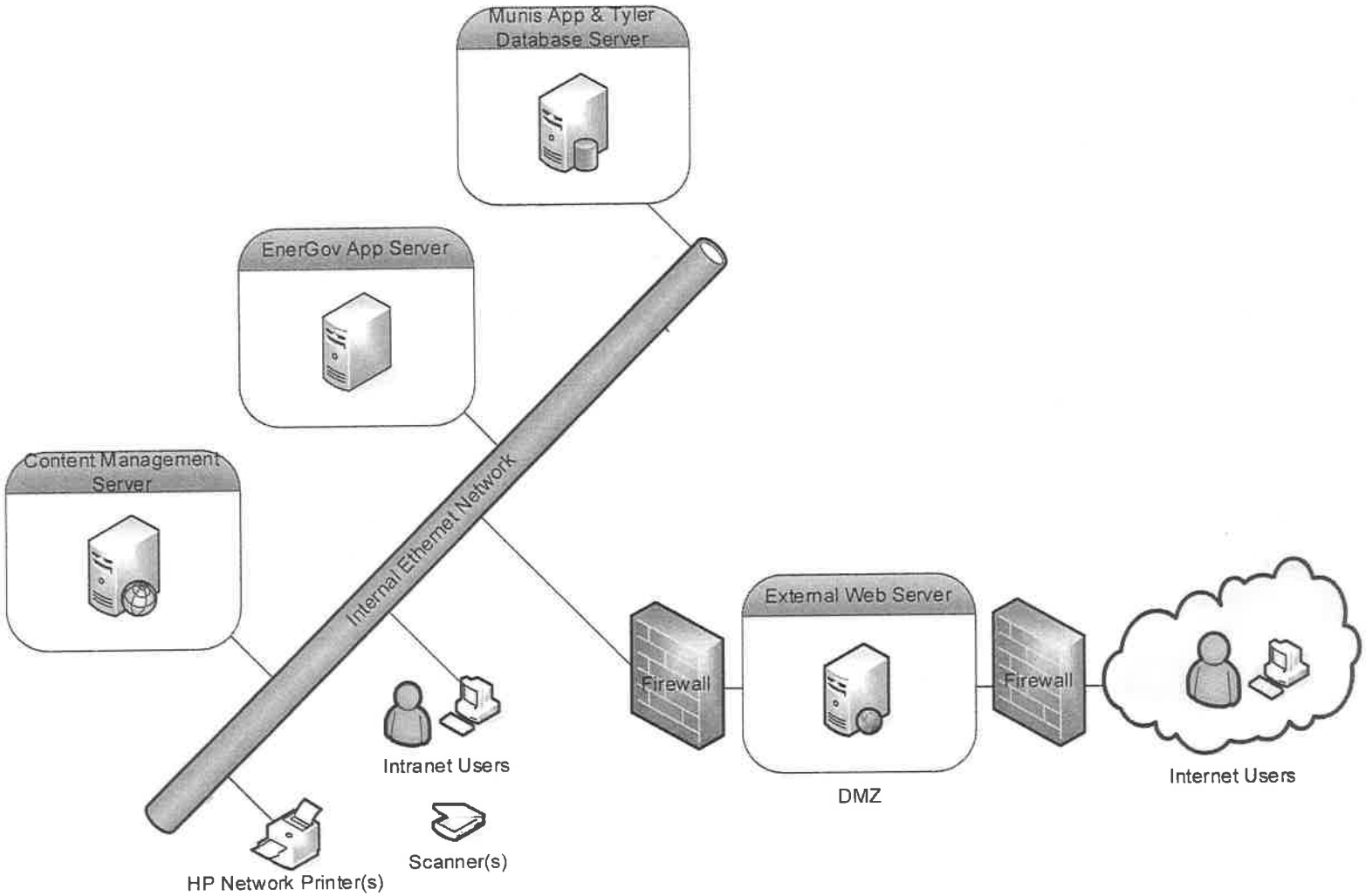
[2] Minimum virtual CPU allocation for virtual configuration.

[3] EnerGov eReview requires additional 500-1TB storage.

Tyler Technologies Infrastructure Diagram

Munis: Up to 250 concurrent users

EnerGov: Up to 50 concurrent users



Munis – Up to 250 Users / EnerGov – Up to 50 Users

The following outlines server infrastructure required for a Munis software implementation sized between 100 and 250 concurrent Munis users and 25 and 50 concurrent EnerGov users.

Server Function	Qty.	CPU (P)[1]	CPU (V)[2]	Memory	Storage	Software
Munis Application & Tyler Databases	1	(2) Intel quad core 2.0Ghz+	4-6 vCPUs	56GB	1TB to 2TB[3]	Windows Server 2012 R2 Standard SQL Server 2012 or 2014 Standard SharePoint 2013 Foundation
EnerGov Application	1	(2) Intel six core 2.0Ghz +	8 vCPUs	24GB	100GB	Windows Server 2012 R2 Standard
Content Management	1	(2) Intel quad core 2.0Ghz+	4 vCPUs	24GB	300GB	Windows Server 2012 R2 Standard
External Web	1	(1) Intel quad core 2.0Ghz+	4 vCPUs	16GB	100GB	Windows Server 2012 R2 Standard

[1] CPU configuration for physical configuration.

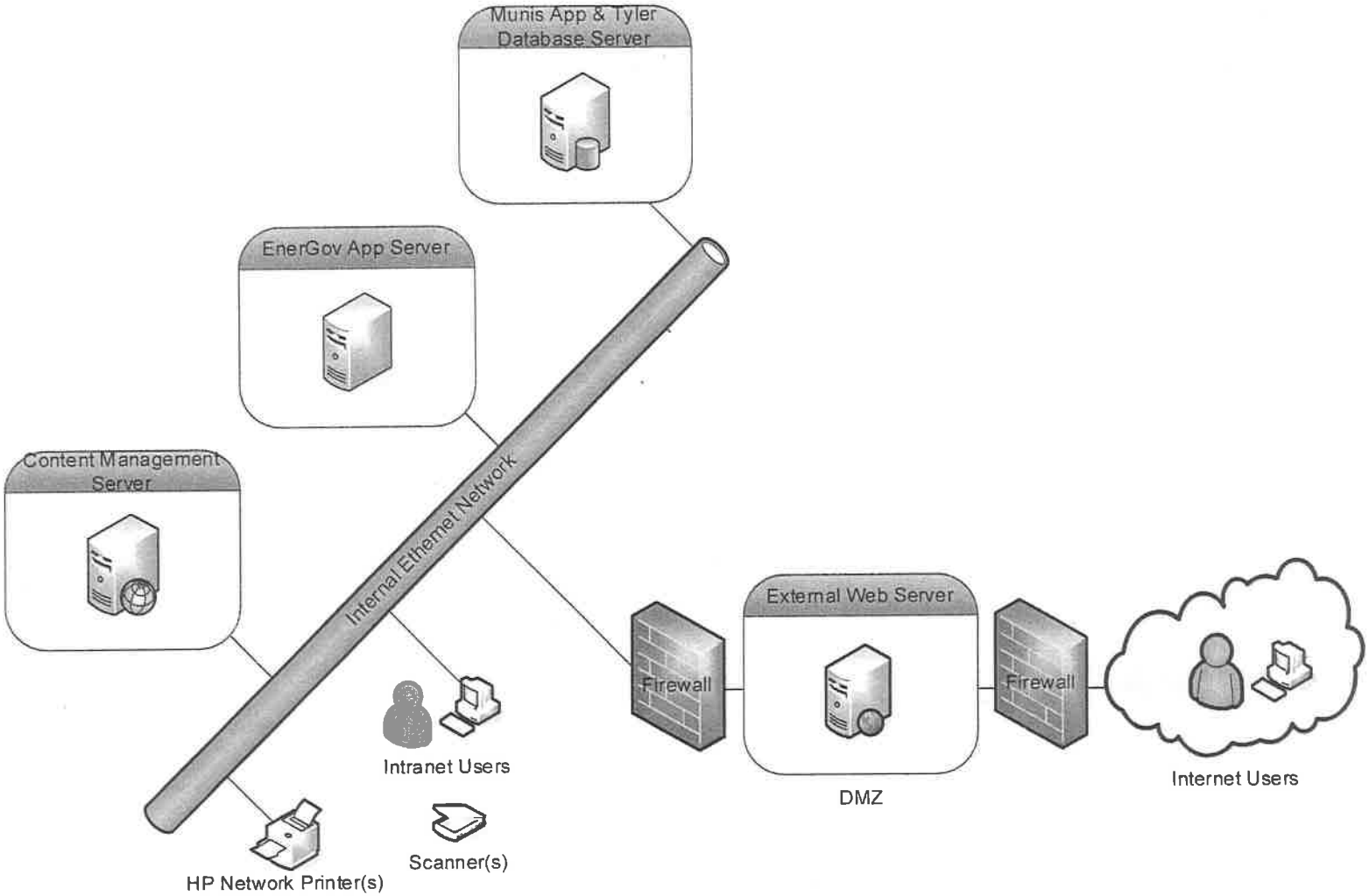
[2] Minimum virtual CPU allocation for virtual configuration.

[3] EnerGov eReview requires additional 1TB-2TB storage

Tyler Technologies Infrastructure Diagram

Munis: Up to 250 concurrent users

EnerGov: Up to 50 concurrent users



Munis – Up to 500 Users / EnerGov – Up to 100 Users

The following outlines server infrastructure required for a Munis and EnerGov software implementation sized between 250 and 500 concurrent Munis users and 50 and 100 concurrent EnerGov users. At this size, Tyler recommends separate infrastructure for non-production environments (e.g. Train, Test).

Sites with more than 500 concurrent Munis users and/or 100 concurrent EnerGov users should contact their Tyler Sales Representative or Tyler's Installations Department for a customized configuration.

Production Environment

Server Function	Qty.	CPU (P)[1]	CPU (V)[2]	Memory	Storage	Software
Tyler Databases[3]	2	(2) Intel quad core 2.4Ghz+	6 vCPU	56GB	3TB to 4TB ea. pair[4]	Windows Server 2012 R2 Standard SQL Server 2012 or 2014 Enterprise
EnerGov Application	1	(2) Intel six core 2.0Ghz+	8 vCPUs	32GB	100GB	Windows Server 2012 R2 Standard
Munis Application[4]	2	(2) Intel quad core 2.0Ghz+	4 vCPUs	32GB	300GB ea.	Windows Server 2012 R2 Standard SharePoint 2013 Foundation
Content Management	1	(2) Intel quad core 2.0Ghz+	6 vCPUs	24GB	300GB	Windows Server 2012 R2 Standard
External Web	1	(1) Intel quad core 2.0Ghz+	4 vCPUs	32GB	100GB	Windows Server 2012 R2 Standard

Non-Production Environment

Server Function	Qty.	CPU (P)[1]	CPU (V)[2]	Memory	Storage	Software
Tyler Databases[3]	1	(1) Intel quad core 2.4Ghz+	4 vCPU	32GB	2TB to 4TB[4]	Windows Server 2012 R2 Standard SQL Server 2012 or 2014 Enterprise
EnerGov Application	1	(1) Intel quad core 2.0Ghz+	4 vCPUs	24GB	100GB	Windows Server 2012 R2 Standard
Munis Application[5]	1	(1) Intel quad core 2.0Ghz+	2 vCPUs	24GB	300GB	Windows Server 2012 R2 Standard SharePoint 2013 Foundation
Content Management	1	(1) Intel quad core 2.0Ghz+	4 vCPUs	24GB	300GB	Windows Server 2012 R2 Standard
Web	1	(1) Intel quad core 2.0Ghz+	2 vCPUs	16GB	100GB	Windows Server 2012 R2 Standard

[1] CPU configuration for physical configuration.

[2] Minimum virtual CPU allocation for virtual configuration.

[3] SQL Server Enterprise Edition is required for high-availability configurations using AlwaysOn Availability Groups in addition to other advanced RDBMS configurations.

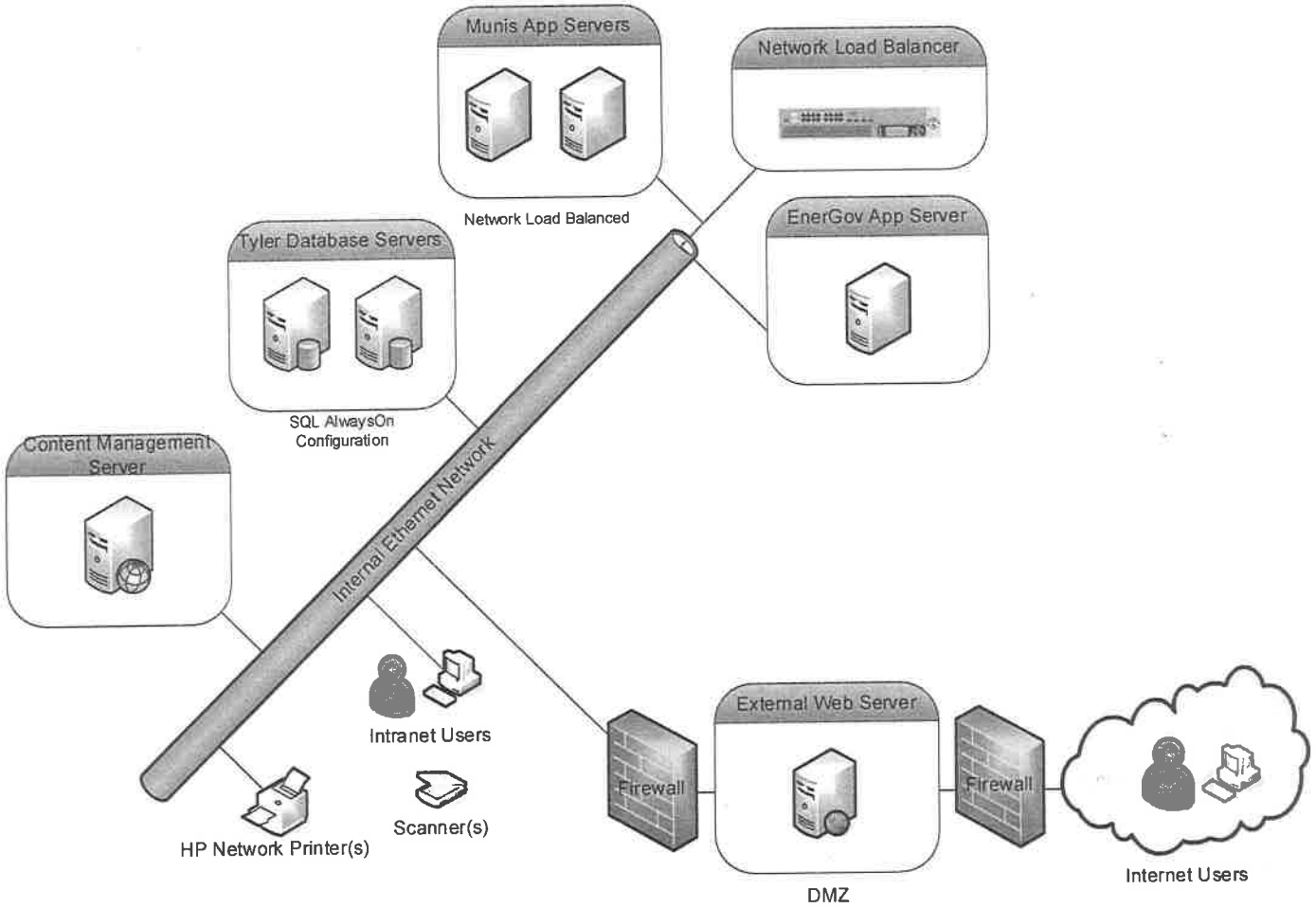
[4] EnerGov eReview requires additional 2TB-4TB storage

[5] Multiple application servers require a Network Load Balance device.

Tyler Technologies Infrastructure Diagram (Production Environment)

Tyler Munis ERP: Up to 500 concurrent users

Tyler EnerGov: Up to 100 concurrent users



Network Requirements

Overview

Tyler applications communicate over TCP/IP and a network infrastructure of 10/100 Mbps between workstation and server and gigabit (1000 Mbps) connections between on-premises servers is highly recommended.

On-premises installations require external web servers reside in a Firewall DMZ. On-premises clients must obtain a 1024-bit (minimum) SSL certificate for all web and application servers to encrypt all traffic over HTTPS between the server and end users.

Bandwidth

Bandwidth usage can vary depending on application user type and their daily functions. Based on benchmarks through Tyler's SaaS data center and Test Lab, Tyler recommends the following bandwidth requirements:

Client to Server:

- Minimum: Mobile broadband
- Recommended: 10/100 Mbps
- 20-25 Kbps per concurrent user session

Server to Server (on-premises only):

- 1GBps network connection

Server to Disk Subsystem (on-premises only):

- Environments up to 250 concurrent users: iSCSI
- Environments over 250 concurrent users: Fiber

Tyler highly recommends sites with many anticipated remote users request a bandwidth utilization report for at least 1 month of recent usage from their ISP to ensure they have sufficient bandwidth available to meet these requirements, especially those considering Tyler SaaS Hosting.

Remote access options for on-premises installations such as Remote Desktop Services (RDS), RemoteApp and Citrix are supported and recommended for low bandwidth environments.

Microsoft Active Directory (on-premises only)

Microsoft Active Directory is required for authentication with Tyler back office applications. All Tyler servers must be a member of a domain that includes Active Directory user accounts for all back office users. All workstations used to access back office applications must also be a member of the same domain. Active Directory configuration and administration is the sole responsibility of the client and must be configured prior to installation of Tyler servers. Munis Self Service users do not require Active Directory accounts or access from workstations that are members of the domain.

Please consult Tyler's Installation Department to discuss using Tyler applications in advanced Active Directory environments.

Email Server Integration

An SMTP email server is required for sending notifications. While any email server can be used for email notifications, Microsoft Exchange is required for the following advanced functionality:

- Automated scheduling in areas such as Scheduler Central for Munis Permitting, Munis Work Orders and Munis Utility Service Orders, and Munis Work Order Facilities room reservations
- Automated archiving of emails initiated from Munis to Tyler Content Manager
- Appointment creation on records directly from Munis
- Munis Dashboard Web Parts for Outlook Email, Outlook Calendar, Outlook Tasks and Outlook Contacts

End-user Requirements

Microsoft Windows Workstations

	Minimum[1]	Recommended
Operating System	Windows 7 (32-bit)	Windows 7 or 8.1 (64-bit)
Memory	2 GB	4+ GB
Disk Space	100 MB	500 MB
Screen Resolution (Munis)	1024 x 768	1280 x 800
Screen Resolution (EnerGov)	1680x1050	1920x1080 2560x1600 (ePlans Review only)

Required PC Software / Components:

- Microsoft .NET Framework v4.5[2]
- Microsoft Silverlight 5.1[3]
- Java Runtime Environment (JRE) 8[4]

Supported Windows Workstation Web Browsers

- 32-bit Microsoft Internet Explorer 11
- 32-bit Microsoft Internet Explorer 9, 10[5]
- 32-bit Google Chrome version 31 or higher[6]
- 32-bit Mozilla Firefox (latest version)[7]

Supported Microsoft Office for Windows[8]

- 32-bit Microsoft Office 2013
- 32-bit Microsoft Office 2010
- 32-bit Microsoft Office 2007[8]

[1] Meeting the minimum PC requirements will ensure the Tyler applications will operate, but will not guarantee performance. All performance and benchmark testing is done with PC's that meet (or exceed) the 'recommended' hardware configuration.

[2] Microsoft .NET Framework required for Tyler Cashiering only.

[3] Microsoft Silverlight required for EnerGov and select Munis functionality only, such as Tyler Content Manager.

[4] JRE required for select Tyler Content Manager advanced functionality only.

[5] Supported with EnerGov only.

[6] Microsoft Silverlight browser add-in is required for EnerGov and select Munis applications. In September 2015, Google Chrome will remove support for Microsoft Silverlight. Users requiring access to Silverlight applications must use Microsoft Internet Explorer.

[7] Firefox supported with EnerGov and Munis Self Service only.

[8] Office 365 supported, but requires Office desktop client.

[9] Excel and Word export supported only. Office client add-ins for Munis are not supported.

Apple Mac OS Workstations

	Minimum[1]	Recommended
Operating System	Mac OS X 10.9 (64-bit)	Mac OS X 10.10+ (64-bit)
Processor	1.8 Ghz Intel	2.5+ Ghz Intel
Memory	2 GB	4+ GB
Disk Space	50 MB	100 MB
Screen Resolution (Munis)	1024 x 768	1280 x 800
Screen Resolution (EnerGov)	1680x1050	1920x1080 2560x1600 (ePlans Review only)

Required Mac Software / Components:

Microsoft Silverlight 5.1[2]

Supported Mac Workstation Web Browsers[3]

32-bit Apple Safari 7.1 or higher (with auto-updates enabled)

32-bit Mozilla Firefox[4]

Supported Microsoft Office for Mac

32-bit Microsoft Office for Mac 2011

Mac OS Limitations

Munis and EnerGov are fully supported on Mac OS X with the following exceptions. This functionality can be obtained using alternative solutions such as RDS to a Windows environment or "Windows on Mac" virtualization (e.g. Parallels Desktop for Mac, VMware Fusion).

Munis Limitations

Microsoft Office for Mac does not support connections to SQL OLAP cubes. Due to this Microsoft limitation, Mac users cannot access Munis Cubes.

Munis Next Year Budget Entry (NYBE) for Excel is a Microsoft Excel add-on is one of several ways users can input and maintain information related to next year budget entry. This add-on is only available for Microsoft Office (2010 and higher) on Windows platforms.

Tyler Reporting Services / SQL Server Reporting Services reports cannot be created or modified.

Advanced Tyler Content Manager functionality such as batch document scanning.

EnerGov Limitations

eReviews is not supported on Mac OS.

[1] Meeting the minimum PC requirements will ensure the Tyler applications will operate, but will not guarantee performance. All performance and benchmark testing is done with PC's that meet (or exceed) the 'recommended' hardware configuration.

[2] Microsoft Silverlight required for EnerGov and select Munis functionality only, such as Tyler Content Manager.

[3] For optimal user experience, Tyler highly recommends all Mac workstations used for back office access (non Self Service) are members of the same Active Directory domain as Tyler servers.

[4] Firefox supported with EnerGov and Munis Self Service only.

Mobile Devices

Application	Any Mobile Device[1]	Windows 8 Tablet	Windows Phone	Apple iPad	Apple iPhone
Munis Application Suite[2]	X	X		X	
Employee Time Off Approvals	X	X	X	X	X
Munis Field Inspector		X	X		
Munis Self Service	X	X		X	
Munis Workflow	X	X	X	X	X
Munis Work Orders		X			
EnerGov Inspections		X		X	
EnerGov Enforcement Management				X	

[1] Not all devices tested regularly.
[2] HTML5 applications only; requires browser with HTML5 support. Some applications may require remote access configuration by the client.

On-premises Installation Process Overview

The installation of Tyler software will be handled by a dedicated team that is well versed in the installation process and will ensure that the project is completed in timely manner. The installation process consists of four general phases and is outlined below:

- Initial Coordination
- Pre-Installation Preparation
- On-Site Installation Visit
- Post-Installation Follow Up & Installation Review

Installation Team Key Contacts

Technology Services Manager
Adam Scheuchzer 1-800-772-2260 x4348 Adam.Scheuchzer@tylertech.com

Installations Manager
Dean Wilber 1-800-772-2260 x4740 Dean.Wilber@tylertech.com

OS/DBA Support Manager
Benjamin King 1-800-772-2260 x4867 Ben.King@tylertech.com

Installation Team Coordinator
Gretchen Sullivan 1-800-772-2260 x4038 Gretchen.Sullivan@tylertech.com

Initial Coordination

The initial coordination phase entails a review of the final Tyler contract, including products purchased and the hardware needs for those products. At this time, the Installation Coordinator will contact you to discuss your timelines and expectations.

A conference call will be scheduled to discuss hardware needs and offer recommendations for the final hardware purchase. The Installation Team will work with you to recommend and review your hardware quotes to ensure they meet our requirements. Once an estimated delivery date is received from your hardware vendor, a date can be scheduled for the On-Site Installation.

Pre-Installation Preparation

Once the installation date is confirmed, an Installation Engineer is assigned to your project and the follow arrangements are made:

- Booking of travel and accommodations
- Travel and On-Site Coordination (This is conducted via email and/or phone call and will serve to confirm dates, travel arrangements, parking arrangements, hours of operation as well as an agenda for the time scheduled on-site. During this communication, the installer is available to answer any questions surrounding the installation, hardware, process, etc.).

The Installation Coordinator will prepare an Electronic Delivery Package of your software. You will receive an e-mail including a Packing List for your software, a Licensing Worksheet and a link to the

Tyler Technologies Electronic Delivery System. You are required to download the software packages available to you, and store them in an accessible location for the Installation Engineer.

On-Site Installation Visit

During a typical installation, the Installation Engineer will travel on Monday and will arrive at the client site Tuesday to begin installation related tasks.

A usual Tyler Installation is a combination of on-site and remote work. Typical installations are completed during a week, however additional on-site or remote work may be needed depending on the installation complexities and configured. These installation weeks will be scheduled over the course of a month or two depending on the over-all project plan milestones.

One of the most critical aspects of the installation process is the Installation Review. This training is intended for your technical staff. Please note that this training is not end-user training and will only cover IT related functions for the purpose of setup, configuration and maintenance. During training, we encourage staff to ask plenty of questions to help familiarize them with your new Tyler Infrastructure.

The following items are addressed during the Installation Review:

- File Systems and Installation Locations
- Critical Services and Accounts
- Backup Plans, Restore Options and Client Requirements
- Refreshing Databases
- Security Concerns (Domain, Local and SQL Accounts)
- Printer Setup and Print to PDF Output Options
- User Account Preparation
- Location and Functionality of Special Products (Dashboard, Central, MSS, TCM, CAFR, etc.)
- Using Remote Assistance
- Installing Client Software
- Technical Product Functionality

Post-Installation Follow-Up

After the Installation Engineer has departed from your site, any general questions, comments or concerns, can be directed to your Tyler Technologies Project Manager. He or she will direct your questions as necessary to ensure a high level of customer service. For any installation specific questions, comments, or concerns, please contact the Technology Services Manager or Installation Coordinator.

Any outstanding items from the On-Site Installation will be scheduled for remote completion. If any of the remote installation work requires Server Installation Sign Off Forms to be completed, the Installation Engineer will prepare these forms and e-mail them to you. The Installation Engineer will review the sign off with you in addition to performing Installation Review for the specific product to

ensure that everything is complete and fully functional. Similarly, if any product is delivered separately to you in order to complete the remote installation, any packing lists accompanying the electronic delivery will also need to be signed and dated. You will then return the completed copies of all paperwork to the Installation Engineer.

Once your Tyler Installation has been completed, the next phase of your project will involve Implementation and Training. Your Project Manager will be the primary contact for assisting you from this phase forward. For any installation related questions, please contact the Installation Coordinator. All support related questions should be directed to the OS/DBA Department or the specific product support group for the fastest possible resolution.

Example Installation Statement of Work

Installation Activity	Tyler	Client
Discuss installation time frame and customer needs	Lead	Assist
Determine database configuration and specification, i.e. cluster vs. mirror	Lead	Assist
Provide server specifications and consultation	Lead	
Obtain hardware quote from vendor	Assist	Lead
Provide quote for review and approval	Assist	Lead
Order hardware and notify of arrival date		Lead
Arrange and confirm onsite installation	Lead	Assist
Notify Tyler when hardware arrives		Lead
Installation Eng. to arrange conference call to discuss and finalize installation process	Lead	Assist
Confirm hardware is configured and brought pre-determined level. O/S at necessary update level and SAN has appropriate LUNs and RAID arrangement.	Assist	Lead
Arrive onsite and begin installation	Lead	
Review overall installation process with customer	Lead	Assist
Provide necessary resources for installation, includes: Network Admin, Active Directory Admin, Server Admin, and any other personnel as previously discussed	Assist	Lead
Install Tyler applications	Lead	
Install and configure SQL database	Lead	Assist, as needed
Install and configure additional products	Lead	
Installation Activity	Tyler	Client
Conduct installation review of all server configurations	Lead	Assist
Conduct training to install end user software	Lead	Assist
Complete installation sign offs	Lead	Assist
Arrange for items that will completed remotely	Lead	Assist
Provide connectivity assistance for remote items	Assist	Lead
Complete remote installation sign offs	Lead	

Exhibit I - Las Cruces, NM Request for Information – ERP Software Application System ("RFI")

Incorporated by reference.

Exhibit J - Tyler's Proposal in Response to the RFI ("Proposal")

Incorporated by reference.

Exhibit K - Tyler Investment Analyses

See schedules 1-4 following this page.

tyler
erp solutions

Work Orders Investment Analysis
Findings and Recommendations

Las Cruces, NM

Table of Contents

1. Executive Summary 3
2. Process Recommendation
    A. General Recommendations 4
    B. Work Order Recommendations 4
3. Recommended Implementation Plan
    A. Work Orders 8

1. Executive Summary

A. Introduction

Tyler Technologies, Inc. (Tyler) conducted a Work Orders Investment Assessment for Las Cruces, NM on the 17th-18th of February 2015. The Work Order assessment covered processes within the city's Work Order (Utilities, Fleet, Facilities) Departments. The purpose of the assessment is to understand current processes, how MUNIS is currently used and identify where MUNIS modules can be optimized to increase benefits to the City of Las Cruces, NM

This is the first part of a two- part process for the MUNIS project with City of Las Cruces. The first part consists of a current process assessment and recommendations; the second part is any assessment and/or training sessions associated with the recommendations adopted by the City of Las Cruces.

City administration may elect to adopt all, any, or none of the recommendations. Some of the recommendations in this report may require the purchase of additional modules, upgrades, and/or analysis/training days. Tyler will also provide a recommended implementation plan for the recommendations provided to the City of Las Cruces, but they may implement the recommendations in any order they choose.

This project was undertaken because, while the City of Las Cruces has used MUNIS for some time, some of MUNIS' functionality has not been implemented and the Authority desires to gain optimal value from that functionality. It was agreed that an analysis of the current use of MUNIS and the general business practices within which it operates would provide the basis for determining the best strategy going forward.

In this report, we have built upon our on-site analysis of the current Work Order business processes as practiced by the City of Las Cruces in conjunction with our MUNIS systems.

We look forward to working with the City of Las Cruces to successfully complete this important project and to assure the highest benefit from MUNIS.

2. Process Recommendations

A. Organization Wide Suggestions

The recommendations listed below are presented in the order in which they appear in the Investment Analysis Workbook. This order is in no way a suggestion of the priority order for the City of Las Cruces. The City of Las Cruces will reorder these in the priority they determine.

Continuation of sound policies, procedures and practices and of cited best practices documented in the associated Workbook would not be repeated below, unless further clarification is necessary. The recommendations that follow should be further reviewed upon the consideration and adoption of recommendations for other modules, since they may have an impact on one another.

B. Work Order Recommendations

1. **Activity Codes:**

   Current Business Practice: Currently there are many activity codes that have been created but are not being used.

   Recommendation: Delete Activity codes that are not being used.

   Benefits: This will allow for efficient entry of Work Orders and eventually Service Requests.

2. **Equipment Assets:**

   Current Business Practice: Currently the only assets in Equipment Assets are the vehicles that Fleet is maintaining.

   Recommendation: Other departments can maintain their equipment that they want to use for Preventative Maintenance or for usage on a Work Order and maintaining the rates on the equipment class codes.

   Benefits: Departments will be able to view their equipment and conduct Preventative Maintenance, run reports, use equipment as subject of service on a work order and track the maintenance of that asset.

3. **Street, Infrastructure, and Facility Assets:**

   Current Business Practice: Currently only the City buildings are in Facility Assets.

   Recommendation: Other departments that are interested in using the Work Order module (i.e. Streets, Parks, Museum) and current departments should enter streets (streets, right of ways, and intersections), infrastructure (mains and services) and other facilities (parks) into the work order module for tracking, reporting, and preventative maintenance.

   Benefits: Users will be able to report on assets, conduct preventative maintenance, and track maintenance on assets.

4. **Preventative Maintenance:**

   Current Business Practice: Currently not using Preventative Maintenance features.

   Recommendation: Once assets (Equipment, Infrastructure, Streets, Facilities) have been entered in, input PM schedules on the class codes of the assets so that the schedules can synchronize to everything in the class code.

   Benefits: This will eliminate manual work order creation for preventative maintenance and will allow for tracking/reporting of preventative maintenance activities.

5. **Work Order Settings (Sub Work Orders):**

   Current Business Practice: The Sub Work Order functionality is currently not being used.

   Recommendation: Set the Sub Work Order level to at least 1 so that Work Orders can be associated together especially with situations with PM. Sometimes PM is done and there are other issues that are discovered and the Work Orders need to be linked together to show that these issues were found while doing routine PM.

   Benefits: Users will be able to see Work Orders that resulted after routine PM.

6. **Labor Class Codes:**

   Current Business Practice: The labor class codes are being used with the labor area of the work oorder, but as personnel changes, the class codes are not being synchronized.

   Recommendation: Run the synchronize program for the labor class codes on a regular basis.

   Benefits: The Work Order module will have the most recent payroll information for the labor section on the work orders

7. **Service Requests:**

   Current Business Practice: Currently not using. When other departments request work, there is either a paper form, email, telephone call or walk in request and someone from the servicing department is entering directly in the Work Order program (if the department is using work orders) or paper forms/excel sheets are maintained.

   Recommendation: Implement Service Requests for those departments that have frequent requests coming in from other departments.

   Benefits: Using Service Requests allows users outside of the servicing departments to enter requests and the servicing departments can manage the requests electronically. Requesting departments can check the status of their requests and receive notifications on status changes of the work order.

8. **Event Notifications:**

   Current Business Practice: Currently not using.

   Recommendation: After Service Requests are implemented, use Event Notifications when work orders are complete, to let the requesting department know that the status of their work order has been changed to work complete.

   Benefits: Requesting departments can receive these notifications and know when the work has been completed.

9. **GL Distribution Codes:**

   Current Business Practice: Currently using for Chargeback work orders. There is a code for each vehicle.

   Recommendation: Consider consolidating codes to have one for each requesting department, so that when accounts may change for the department only one code needs to be updated, instead of the code for each vehicle in that department.

   Benefits: There will be a more streamlined set of codes to maintain.

10. **Templates:**

    Current Business Practice: Currently have templates that have outdated information.

    Recommendation: Delete unwanted templates. Once preventative maintenance is implemented, templates will provide checklist information, estimated costs, etc.

    Benefits: The PM work orders will already have checklist information and any other default information on the work order.

11. **Work Order User Defined Fields:**

    Current Business Practice: Currently using user defined fields on the work order but the codes are repeated as each department has the same codes which does not allow for accurate reporting.

    Recommendation: Clean up user defined fields so that the code/field is the same for each department. When reporting is done the user can then look for one code instead of multiple codes.

    Benefits: This will allow for accurate TRS reports on user defined fields.

12. **Utilities Work Orders:**

    Current Business Practice: Currently Utlities (Gas, Water, Wastewater) have their Work Orders in the Public Works section of the Work Order module.

    Recommendation: These departments can use the Utilities section of the Work Order module if they want separation from other departments that may implement work orders.

    Benefits: This will provide separation in the Work Order module.

13. Fuel Import:

Current Business Practice: Not currently using Fuel Import. Have FuelMaster as a fuel vendor

Recommendation: Use the Fuel Import program to import fuel usage and odometer readings to the Work Order Module. Fuel can be tracked as a supply or inventory to allow for chargeback of fuel costs to the requesting department (which would be the department in which the vehicle belongs)

Benefits: This provides an efficient way to track fuel usage and odometer readings. Once Preventative Maintenance is implemented, there will be PM schedules based on odometer reading and having the fuel imported regulary will eliminate the need for manual odometer entry. The Fleet department will also be able to charge the departments for fuel usage.

14. Partial Billing:

Current Business Practice: Not currently using partial billing Functionality.

Recommendation: Use partial billing to bill requesting departments over time.

Benefits: can charge departments over time if a work order needs to stay open over an extended period of time.

3. Recommended Implementation Plan

Below is the recommended steps needed to implement our recommendations. The total implementation time of each recommendation will be determined at a later date.

Work Order Implementation Plan

Work Orders

- Conduct refresher Work Order training
- Create Desktop Procedure Documents
- Implement Work Orders for those departments not currently using Work Order module

EXHIBIT K - SCHEDULE 2

General Billing Investment Analysis

Las Cruces, NM

Findings and Recommendations

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Table of Contents

1. Process Recommendation 3
    1. Updates and Upgrades
    2. Late Fees
    3. Customer File
    4. Citizen Self Service/General Billing Integration
    5. Workflow
    6. AR Codes
    7. Implementation of Recommendations

Process Recommendations

1. **Updates and Upgrades**

   Current Business Practice: Client is considering upgrading to version 11 from version 9.4. They are considering either a standard upgrade or a reimplementation. Client is strongly considering a reimplementation over an upgrade.

   Recommendations: Upgrade to version 11 with the guidance of Tyler staff.

   Benefits: Standard releases contain fixes and mandatory federal and state requirement updates. Being on a standard release will greatly reduce the amount of new enhancements that are introduced to end users and allowing them to settle in on the existing functionality.

2. **Late Fees**

   Current Business Practice: Customers are asked to pay bills within 28 days of issue, but there are no late fees or interest charged on bills.

   Recommendation: Begin charging Late Fees on bills that are not paid by due date.

3. **Customer File**

   Current Business Practice: There are approximately 226,000 customers currently in the Customer File. There are lots of duplicate entries or inactive customers.

   Recommendation: Begin cleaning up customers. If a duplicate customer is identified, the Customer Merge program should be run. Customers without activity for a certain period of time should be marked as inactive. When upgrading/implementing this file should be a major focus to make sure you are only converting data that currently matters. The file should be cleaned up during the conversion process and customers that are duplicate/inactive should be removed from the conversion. Once file is cleaned up, user access should be greatly reduced. Currently, many users from many departments can access, create, and maintain the customer database. That should be reduced to a few central people.

4. **CSS/General Billing Integration**

   Current Business Practice: Customers can go online to Citizen Self Service program and pay their utility bills.

   Recommendation: Set up and allow customers to pay General Bills through Citizen Self Service online.

5. **Workflow**

Current Business Practice: Workflow is not currently being used for General Billing program.

Recommendation: Reassess the need for workflow in General Billing. When generating an invoice there are 4 options: GBA – General Billing Invoice Approval, GBI – General Billing Invoice Notification, GBM – General Billing Invoice Maintenance, and GIM – Incident Maintenance. When posting payments there are 11 options: BOX – Lock Box Processing, PEO – Payment Entry Output, PJN – Payments Journal and Post, PPP – Processing Pre Payments, RFA – Bill Refund Approval, RFB – Bill Refund Batch Release Approval, RFN – Bill Refund Notification, RRB – Refunds and Reversals Batch, RRF - Refunds and Reversals Refund, RRV - Refunds and Reversals Reversal, RVA – Receipt Reversal.

6. **AR Codes**

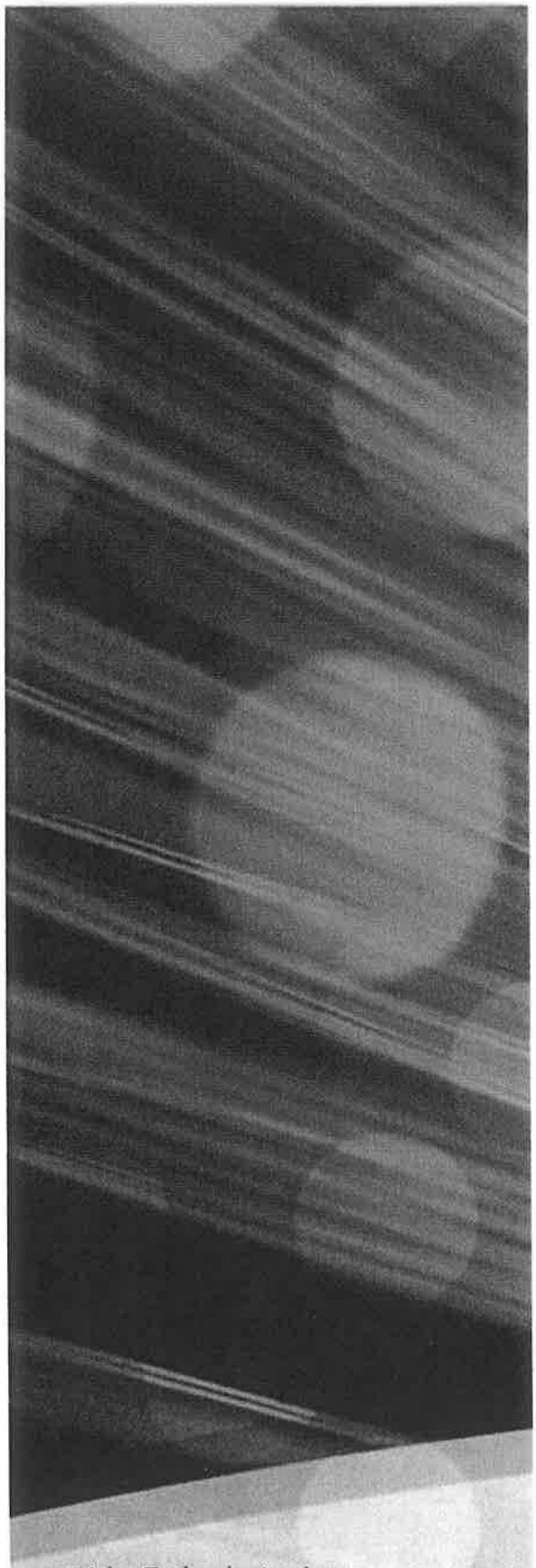
Current Business Practice: AR Codes set up for City, regional landfill, and gas association.

Recommendation: Add additional AR codes especially under City. This will allow much more custom roles/reporting. Most role based security is AR Code based, so right now you can give access to City or None; going forward we will want to break City down into different departments like Airport and Parks so users from Airport can be restricted to only those AR Codes. It will also make it very easy to report on a department like Airport or Parks.

7. **Implementation of Recommendations**

Implementation of the above recommendations in the current version of Munis would consist of two training days. Day one would include set up training and testing for the proposed changes. Day two would consist of user training for the proposed changes.

EXHIBIT K - SCHEDULE 3



Financial Resources Investment Analysis

Findings and Recommendations

City of Las Cruces, New Mexico

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tyler technologies

Table of Contents

1. Executive Summary 3
2. Process Recommendation
   A. General Recommendations 4
   B. Financial 8
3. Recommended Implementation Plan 18

1. Executive Summary

A. Introduction

Tyler Technologies, Inc. (Tyler) conducted a Financial Investment Analysis for the City of Las Cruces on November 4 & 5, 2014. The Munis software has been in use at the city since 2005. The purpose of the analysis is to understand current processes, how MUNIS is currently used and identify where MUNIS modules can be optimized to increase benefits to the City of Las Cruces.

This is the first part of a two-part process for the Munis project with the City of Las Cruces. The first part consists of a current process analysis and recommendations; the second part consists of any analysis and/or training sessions associated with the recommendations adopted by the City of Las Cruces. All analysis and training days suggested herein are estimated. Each analysis process for a module or function will help provide a clear picture of what will be needed specifically at the site to achieve goals identified within the Investment Analysis and those identified during module/function analysis.

The City of Las Cruces may elect to adopt all, any, or none of the recommendations. The City of Las Cruces may implement the recommendations in any order they choose. Client may elect to have analysis or training sessions executed on site or via remote connection. The recommendations in this report may require the purchase of additional modules, upgrades, and/or analysis and training days.

The City of Las Cruces has had a large amount of staff replacement. Their Munis system had been set up by previous personnel. The set-up is no longer functional for the city to take full advantage of the processing and efficiencies that Munis has to offer. They are currently on version 9.4FF. The cities chart of accounts set up is not functionally sound, nor efficient. It is strongly recommended for the city to evaluate their chart of accounts and determine the optimal set-up for them. Upon consensus they it is suggested that they re-implement or convert their COA to the new set up. They should upgrade to version 10.5, or 11 in conjunction with their re-implementation. Included would be training on cumulative financial enhancements between Version 9.4 and 11.0.

Additional items that have been identified include using budget method 3, rather than 1 that they are set for. They should review the user permissions and roles for effectiveness as many users have permissions that they should not. Overall processing efficiency would be gained by retraining in the modules, with current enhancements, to allow staff to best utilize the full functionality and efficiency of Munis, as described below in detail.

2. **Process Recommendations**

A. <u>General Recommendations</u>

1. Munis Version Upgrade

Current Business Practice: The City of Las is currently on Version 9.4FF.

Recommendations: The city should upgrade to Version 10.5 or 11.0 with full enhancement functionality.

Benefits: By coming up to the most recent version of Munis the city will benefit from the complete functionality of Munis and will create efficiencies within and between modules. Additional functionality may result in reduced staff time and increase green efficiencies.

Implementation: Contact representative for contract inclusion of upgrade and functionality / enhancement training estimates.

2. General Ledger Segments and Chart of Accounts

Current Business Practice: The City of Las Cruces' general ledger is utilizing as many as 10 segments, including object code and project segment. A couple of the segments (i.e. department and division) appear redundant. They would greatly benefit from reduction in segment usage.

Recommendations: The size of the city and their lack of complex structure do not warrant inclusion of all general ledger segments. They should focus on necessary levels of segment usage and come to a city wide consensus on needs for internal and external reporting and processing needs.

Benefits: Reduction and restructuring of the chart of account segments through redefining their usage will greatly reduce the number of funds and accounts that the city has. In addition to reduced number of accounts the system would likely gain operational efficiency.

Implementation: Conversion team to discuss reimplementation or conversion.

3. System Setup

Current Business Practice: The City of Las Cruces has been using Org – Object structure for operational purposes within Munis. They have inquired about Long Account structure.

Recommendations: Decision makers may use long account structure in an interim period to base decision on which method to use. This may be done in the Train or Test database so that changes do not interfere with day to day operations.

Benefits: Using long account structure, at least in the interim, may provide them insight as to the true structure of their chart of accounts and the redundancies and inefficiencies it provides.

Implementation: Users can be toggled on by one to use Org / Object or Long Account.

4. **Budgetary Method**

Current Business Practice: The City of Las Cruces is currently set to use Budgetary Method 1 - GAAP and their practice is to close all Purchase Orders at Year End, they then re-create new ones in the New Year.

Recommendations: Change Budgetary Method to 3 – GAAP / Budget Combined. This will facilitate carrying open Purchase Orders forward by setting the appropriate balance sheet 'Reserve for Encumbrances' at year end and moving the encumbrances back to their actual expenditure accounts at Open New Year. The original Purchase Order number is maintained on carry forward.

Munis provides the ability to create the Budget Carry Forward as a part of the Year End Process.

Benefits: Using Budgetary Method 3 creates the ability to carry forward open Purchase Orders at Year End and have the system generate the appropriate GAAP handling for financial reporting. In addition to systematically creating the entries necessary using this functionality also reduces staff time by not requiring re-entry of all previous Purchase Orders again in the New Year.

Implementation: No additional training is required. The site would include additional processes at year end and may decide to integrate policy to periodically review purchase orders for cancelling or closing as a part of their month end process.

5. **Tyler Dashboard**

Current Business Practice: The City of Las Cruces is not currently utilized Tyler Dashboard.

Recommendations: Consider utilizing the Tyler Dashboard. In addition, it is recommended that Central Program and Web Parts be utilized. The Central Programs allows users to inquire and view Financial, HR/Payroll, Revenues and System Administration information all within the Dashboard. Web parts are web-based portals that display information from different parts of MUNIS.

Benefits: The Tyler Dashboard provides greater flexibility in menu customization as well as more role-specific programs. Dashboard web parts and Munis Central Programs provide relevant, immediate information for decision-making.

Implementation: Utilize train the trainer approach to train end users on MUNIS Central Program and Web parts.

4. **Role Based Access Control**

Current Business Practice: Users permissions are currently set up in a mixed capacity. They have some roles that have been set up based on users and new ones that have been set up on function and permission.

Recommendation: Continue to utilized role based security permissions for user functional control and data access rather than roles based on positions or user. Review those users that exist and transition them to functional and data access roles.

Benefits: Role Based Security is a system of controlling which users have access to resources based on the role of the user. This facilitates establishing and maintaining users with various security and menu profile using roles. Roles are created and assigned a group of permissions. The roles are then assigned to users to grant access to resources.

Implementation: N/A

5. **Tyler Content Manager**

Current Business Practice: City of Las Cruces currently does not use Tyler Content Manager for MUNIS. The site is using a Laser fiche product via the clerk's office.

Recommendations: Use Tyler Content Manager or integrate Laserfiche to store, attach and add searchable fields to documentation.

Benefits: Tyler Content Manager allows for batch scanning that can significantly increase the efficiency of paper invoice scanning. It also allow for use of Document Types which classify content in Tyler Content Manager. By classifying content within specific document types, you can control access and define points of integration with MUNIS products. Using Tyler Content Manager enables search ability of documents.

Implementation: Contact Tyler Sales Representative for quote.

6. **Interacting with Tyler**

Current Business Practice: There are users at the site that are unaware of the many available Munis tools including the Munis Knowledgebase, Tyler Community, free online education opportunities, using Release Administration, effectively interacting with Munis Technical Support, etc.

Recommendation: Train users in these areas.

Benefits: Users will be better positioned to make highest and best use of the product by understanding these tools.

Implementation: N/A

7. **Data Management**

Current Business Practice: No data purging has occurred since site started on Munis in 2005.

Recommendation: Review record retention policy. Create a data purging schedule with input from site's auditor and/or retention policy.

Benefits: Databases grow exponentially and need regular maintenance. Annual purging on an on-going basis allows more efficient database processing.

Implementation: N/A

8. **TRS Reports / Excel Cubes**

Current Business Practice: Site has support services contracted with TRS.

Recommendation: Review reporting need that TRS services may be able to assist with created or creating reports. Utilize Excel Cubes once upgrade to MUNIS version 10.3.

Benefits: While Munis has innumerable canned reports, sites often need site specific reports. Tyler Reporting Services, facilitate a site's ability to create site specific reports. Once on Munis Version 10 and higher, Microsoft Excel Cubes will be available. Excel Cubes are made up of predefined and organized sets of data fields that give Munis users a multi-dimensional look at their information. Using Excel PivotTables, Munis users can then easily slice, organize, and display exactly the data they need, in meaningful spreadsheet, chart, and graph formats.

Implementation: Access Tyler Knowledgebase to obtain video on how to use MUNIS cubes.

B. Financial Recommendations

1. General Ledger – Pooled Cash

Current Business Practice: The City of Las Cruces currently uses the concept of pooled cash with their chart of accounts structure, fund 9999.

Recommendation: The city is not currently set for optimal pooled cash reporting. Setting up systematically generated pooled cash reporting would facilitate the use of Bank Reconciliation and automated Due To / Due Form entries for more efficiency. The change would best include using the following structure:

Example:

A pooled cash fund houses all cash in 101000 cash account and has corresponding offsets as liabilities of i.e. 217000 Equity of XXX Fund. In each operating fund the cash might be i.e. 104000 Equity in pooled cash and investments, which would tie to the 217000 in the pooled cash fund for the respective fund cash. The Due To / Due From would be set up to facilitate these accounts between each fund and 9999. This change and set up would be best facilitated during the COA restructuring.

Benefit: Setting up Pooled cash completely will facilitate matching available cash fund reporting by type and balances at a glimpse as well as facilitate reporting. Cash receipting and disbursements would be facilitated through the 9999 fund and reconciliation of cash may be easier.

Implementation: Analysis (1/2 Day), Training (1 Day).

2. GL Report Templates

Current Business Practice: Client is unaware of the GL Report Templates Program in the General Ledger.

Recommendation: Use the GL Report Templates program to create custom general ledger reports.

Benefits: The General Ledger Report Template program provides users flexibility within MUNIS to create custom general ledger reports by allowing users to select various fields to include in the custom report. Additional functionality allows for the use of 'Math' to create custom calculations.

The reports can be scheduled to run with scheduler, exported as a PDF or Microsoft Excel.

Implementation: Training (1/2 day) or train the trainer.

3. **Multi-Year Funds**

Current Business Practice: The City of Las Cruces currently does not use multiyear funds.

Recommendation: Consider the practice of utilizing MY funds.

Benefits: If site has accounts where budgeting is multi-year (i.e., the budget for a particular project is granted in one year then drawn down over multiple years) or a bond project that is funded in year one and spent over multiple years. Multi-Year Funds can be utilized to manage these budgets.

Implementation: Training (1 Day)

4. **Project & Grant Accounting**

Current Business Practice: The City of Las Cruces owns the Project Accounting module, but currently do not utilize the Project Ledger or Grant Accounting functionality. Projects are tracked within a segment of the organization code.

Recommendation: Arrange Project Ledger & Grant Accounting Analysis and Training. *I do not recommend pursuing this training during the Chart of Account restructuring but rather hold off until the restructuring is complete and dedicate one or two users to become specialists in this module and train others as necessary.*

Benefit: MUNIS Project Accounting provides a method for multi-year tracking of budgets, expenditures, and revenues for user-defined projects such as capital improvements, special programs, and so on. You can record project detail in the General Fund as well as all other funds (Special Revenue, Grants, and so on). Create separate Grants and track the entire grant process, from application through conversion to a project.

Project Ledger has the ability to handle Project specific budgeting that can be driven to the General Ledger Budget Projection. This assists in specific project budgeting outside of the General Budget Projection. The project accounts must exist in the Budget Projection to import the Project Budgets.

Both Project Accounting and Project Ledger can be integrated with the Grant Master and General Billing. Using these can provide the ability to bill directly through activity within the projects and systematically create AR invoices that are posted to the general ledger for internal and external charges.

The addition of the Project Ledger functionality allows you to track project revenues and expenses in more detail than required by the general ledger, and limit the need to add additional project related accounts to the general ledger.

Implementation: Analysis (1 day), Functional Leader training (2-3days)

5. **Budget**

Current Business Practice: Next Year Budget Process is decentralized. Department heads are restricted to accounts in NY Budget Entry. Detail budget requests are required for specific accounts. Users departments are set at levels 1 and 2 then the budget department handles for level 3, 4 &5. Salary and Budget Projection is currently used.

Roll up codes are being used but may be used more functionally to assist in budget checks on transactions and addition of accounts to the codes.

Recommendation: The budget import functionality works well when import summary amount only and for budget process that is centrally controlled.

The alternative option is the use of MUNIS NYBE Excel Ribbon. With the NYBE Excel Ribbon, users are able to download a copy of their budget accounts from a budget projection, update amounts, add or remove columns, run calculations and formulas, and refresh their general ledger amounts as necessary. The NYBE Excel Ribbon will pull in summary, detail, and position summary and position detail information from a budget projection. Once users have completed updating their budget requests, they can upload the budget into MUNIS from the Excel worksheet.

It is recommended to flag accounts that require budget detail in the Account Master as "Required Budget Detail". This will force users to enter budget detail for the requested amounts in NYBE. A global update to flag all objects that require budget detail is available in Account Master.

Benefit: Using the MUIS NYBE Excel Ribbon will increase efficiency with NY Budget process by allowing users to enter budget request from an excel spreadsheet and upload to MUNIS directly from Excel.

Implementation: Functional Leader training (1 day)

6. **Budget**

Current Business Practice: User roles vary on the ability to override budget. Currently Gen Journals are overriding budget for accounts that are encumbered against. When AP inputs an invoice(s) against an account that has PO amounts encumbered and a GEN Journal entry has reduced the available budget, they are blocked from continuing to process due to over budget. This is due to the AP clerks not having over ride permission and the lack of budgetary funds in the account.

Recommendation: Review user permission to override budget and determine if the settings are best for the practice. These settings may vary based on the processing and section.

Benefit: Reviewing these permissions and providing or taking away permission to override as necessary should reduce the likelihood that users are not able to process their transactions as needed.

Implementation: Internal review process. Training (1/2 Day).

7. **Purchasing**

   Current Business Practice: All purchases are entered as requisitions by department; the requisitions are funneled through the workflow approval process and converted to purchase orders.

   Recommendation: Continue current requisition process in addition to customizing the requisition entry screen to hide unnecessary fields. Custom requisition entry forms can be created.

   Benefit: Customizing the Requisition screen will streamline the requisition entry for end users and speed up data entry.

   Implementation: N/A

8. **Purchasing**

   Current Business Practice: E-Procurement is not in used.

   Recommendation: Consider implementing E-Procurement. VSS is a prerequisite for this functionality.

   Benefit: E-Procurement allows you to acquire goods or services electronically. E-Procurement allows user to instead of manually entering the line items detail on a requisition, the user would select "shop on line" option on the tool bar. The user would select from a list of available online vendors which will then launch the vendor website. The user can then select the items in which they would like to purchase and then check-out from the vendor's webpage. The user will have the option to "create order requisition" from the vendor web page to create the detail line items on the requisitions from the items selected from the vendor website.

   Implementation: Analysis (1 day), Functional Leader training (1 day)

9. **Purchasing**

   Current Business Practice: Commodity Codes are not fully used.

   Recommendation: Implement Commodity Codes to be integrated with Vendor Self Service, Bid Management and Inventory.

   Benefit: Commodity Codes allow for consistency across modules and within reporting throughout the Munis system. When incorporated with Bid Management, Vendor Self Service and Inventory a user can compare vendor prices for a specific commodity. Also Vendors can designate themselves as specific Commodity Vendors in VSS which systematically facilitates the driving of bids to those vendors on issue. The Inventory Module will track last purchase quantity and price to facilitate inventory valuation and cost projections.

Implementation: Analysis (1 day), Functional Leader training (1 day)

10. Purchasing

Current Business Practice: PO Receiving is not fully used. The site is not using ¾ way matching.

Recommendation: Implement PO Receiving and ¾ way matching.

Benefit: PO receiving records allows for the use and setup of three-way match in MUNIS. The three-way matching feature allows you to require that three separate items be checked before an invoice can be released for payment: a purchase order, a vendor invoice, and a receiving record. The information on all three items must match, or the invoice cannot be released into workflow or posted. The system verifies different amounts of information based on which three-way matching method you select. The use of three way match is a global setting.

In conjunction with Inventory creating a PO Receiving record in MUNIS will automatically update the QOH of the inventory item that was replenished through a Requisition/PO.

Implementation: User training (1/2 day)

11. Bid Management

Current Practice: The City of Las Cruces owns the Bid Module.

Recommendation: review use of the Bid Module in conjunction with Vendor Self Service, requisitions and department requests.

Benefit: With Munis Bid Management you can create any number of bid catalogs. Bid catalogs can be initiated for yearly purchases of items or generated through the Munis requisition process. Individual departments can enter on-line requested quantities for item being put out to bid. Once the bid has been established notifications can be sent to vendors via e-mail. Vendors can either mail their bids to the requesting site or optionally enter their bid information using Munis Vendor Self-Service. Additional criteria in the form of custom RFP questions can also be attached to a Munis bid. From vendor responses, Munis determines the best vendor to award a bid to by individual bid line item. Awarded bids can be used to create Purchase Orders or converted into a Contract that can be purchased against for the term of the bid.

Implementation: Contact Tyler Sales Representative.

12. Inventory

Current Business Practice: The City of Las Cruces owns the Munis Inventory module.

Recommendation: Continue to use the Inventory Module. Consider integrating with Commodity Codes for reporting and pricing value. Use with requisitions and PO Receiving to automatically create pick tickets or replenish stock.

Benefits: Maintaining inventory on hand of regularly purchased items can cut costs and provide efficiency site-wide. Munis Inventory stores and reports items such as office supplies and public works inventory. In conjunction with Munis Purchasing, you can buy items in bulk and issue them to departmental users as needed. You can choose the item cost method: by average (over all lots received), or FIFO (first in, first out). Munis will manage inventory accounting automatically, including on-hand balances, month-to-date (MTD) and year-to-date (YTD) values.

Implementation: Training, if needed (1 Day)

13. Contract Management

Current Practice: The City of Las Cruces owns however does not currently use the Contract Management Module.

Recommendation: Review use of the Contract Management module.

Benefit: Contract Management module allows you to manage agreements between your organization and a vendor. With various enforcement methods for tracking, it offers the flexibility needed for the different types of agreements your organization obtains. For example, it allows you to create and approve contracts for purchases and encumber the appropriate funds in advance, before details such as quantities and delivery dates are known. Later, as these specifics become clear, you create requisitions, purchase orders, and invoices that refer to the contract to avoid re-encumbering the same funds. Contract Management is fully integrated with General Ledger, Requisitions, Purchase Orders, Accounts Payable, and Workflow.

Implementation: Contact Tyler Sales Representative.

14. Accounts Payable

Current Business Practice: Accounts Payable is centralized at Las Cruces. Invoices are routed for approvals and posted by AP clerks.

Recommendation: Consider utilizing decentralized processing with TCM documentation and PO Receiving (with three-way match) in Accounts Payable.

Benefit: Decentralizing the AP Invoice entry process provides segregation of duties and places the input in the hands of clerks more directly knowledgeable of the

purchase. The may reduce misapplication to Purchase Orders and Contracts as well as reduced the likelihood of erroneous payments.

While using the three-way match reduces likelihood of payment for goods not received. The three-way matching feature allows you to require that three separate items be checked before an invoice can be released for payment: a purchase order, a vendor invoice, and a receiving record. The information on all three items must match, or the invoice cannot be released into workflow or posted. The system verifies different amounts of information based on which three-way matching method you select.

Implementation: Analysis (1 day), Functional Leader training (1/2 day), End User training (1 day)

15. Accounts Payable

Current Business Practice: The City of Las Cruces currently voids outdated checks and invoices to handle their escheat Process.

Recommendation: Consider using Munis Stale Date process.

Benefits: The stale check process will place those checks in a stale status and the invoice remains in a paid status. The funds are placed in a balance sheet (Liability) account for payment to the state with the resulting report of vendors.

Implementation: Training (1/2 day)

16. Accounts Payable

Current Business Practice: The city currently handles wire payments from the bank to vendors via journal entry.

Recommendation: Process wire payments through AP as a wire payment type.

Benefits: By processing through AP as a wire payment type and actual invoice is entered however no check is processed. This results in the expense being charged for the payment and the vendor record being appended for history.

Implementation: Processing change

17. Accounts Payable

Current Business Practice: Site is not currently retaining any amount of vendor payments.

Recommendation: Consider using Munis AP / Contract Retainage.

Benefits: While the most common use of AP Retainage is to provide incentives for the contractor to complete their duties, a percentage of vendor payments can be held back for any site-defined reason.

Implementation: Functional Leader training (1/2 day)

18. Vendor Self Service

Current Practice: Client has Munis Self Service installed but has not implemented Vendor Self Service.

Recommendation: Set up Vendor Self Service.

Benefit: Vendors calling to inquire on their history with a site can be directed to Vendor Self Service saving time in the AP office. In addition, vendors can enter bid prices directly, preventing the need for staff to manually key each bid from each vendor for comparison purposes.

Implementation: Analysis (1 day), Functional Leader training (2 days)

19. Fixed Assets

Current Practice: Client employs the Fixed Assets Munis module. Invoices are not imported via FA Work File program.

Recommendation: It is recommended that the client obtain training on FA to review the FA process and explore functionality within the FA programs such use of the Fixed Asset Accounts, Fixed asset Work File as well as integration with Work Order for CIP assets, adjustments, improvement transfers, etc.

It is recommended that the FA Accounts Payable Report be run to clean up the old invoices/purchase orders that were marked as fixed assets. The invoices/PO on the list should be imported as a work record and then deleted from the Fixed Asset Work File. Moving forward, the FA Accounts Payable list should only contain new invoices marked as fixed asset to be imported though the Fixed Asset Work File.

Consider turning on the FA flag to post the fixed assets transactions to the General Ledger. The assets, contra, depreciation, and accumulated depreciation entries are not made to the operating fund for governmental fund assets. The entries will be posted to either the Governmental or Proprietary fund.

Consider using the Work Order module to create and keep track of CIP fixed assets. Fixed assets with a status of CIP can be built as Work Orders assets and applied as the subject of services on Capitalized Work Orders. Cost will be tracked through WO. As the cost are accumulated, or when the work is complete, the CIP journal and Post program can be run to update the Fixed Asset current book value and corresponding CIP General Ledger Accounts. When the work is complete, and after

the final CIP journal is posted, the fixed asset will be activated through the Fixed Asset CIP post and final adjustments will be made to the FA general ledger accounts.

Use the Activity (History) List report to capture the additions, adjustments and transfer records.

Benefit: The Fixed Asset program is designed to help manage all fixed assets within one system. By posting the Asset to the GL, users can obtain a complete set of financial statements and report changes in fixed asset values over a fiscal year.

Implementation: Functional Leader Training (1-2 day)

20. Treasury Management

Current Practice: The cities process for bank reconciliation is currently to perform the check reconciliation in Munis and export the deposits to Excel to reconcile them outside of Munis.

Recommendation: Review the deposit entry and consider using detail posting of receipts to the GL as well as review the timing of processing cutoff to coincide with the bank. Use GL entry accounts to match GL and bank transactions.

Benefit: Reconciling within Munis provides the ability to have a timely and accurate reconciliation tied to specific bank codes. An effective cutoff foe processing will result in a cleaner matching of journal to bank transactions.

Implementation: Change in process

21. Treasury Management

Current Practice: The city uses the bank import process for clearing checks in Munis but clears deposits manually

Recommendation: Use bank import files to clear and reconcile deposits.

Benefit: Using the bank import to clear deposits provides efficiency and reduces chance of manual error.

Implementation: Change in process. Contact support for bank import file formats.

22. Treasury Management

Current Practice: Debt service and Investment proceeds are currently being tracked outside of the General Ledger and Munis.

Recommendation: Use Munis Treasury Management to input Investment and Debt Service journals to provide the effective information to handle cash projection and amounts that are to become due at specific intervals. Debt service balances would

need to be handled in the General Ledger. Governmental debt could be tracked in a separate account group and directly affected by journals.

Benefit: Tracking these in the treasury module will provide a more accurate cash need and housing debt and investments in the General Ledger will provide accurate balances at a snapshot without manually tracking in Excel.

Implementation: Analysis (1/2 Day) Training (1 Day)

23. Bank Reconciliation / Utility Billing

Current Business Practice: Site has the bank reconciliation module. Currently the setup of transactions between the utility billing and cash receipting does not facilitate a systematic process for reconciliation. This requires the cash management team to spend a lot of manual time to reconcile deposits.

Recommendation: Review the functional setup of the Utility Billing and Receiving module for optimal settings and processing of receipts and payments. Look at the process and procedures in place for the cashiers and clerks at each location for optimal processing and posting to the general ledger.

Benefits: revision of the cash receipting process would better facilitate the use of the system to reduce man time required to reconcile to the bank as well as increase the efficiency of information from the system.

Implementation: This is an ongoing review and is being discussed between Munis Financial Consultants and the Utility Billing team. Future coordination with Las Cruces Staff will be necessary for completion of this review. Munis consultants will be corresponding to discuss the possibility of a review of the Utility Billing and Cash Receipting functionality.

3. Recommended Implementation Plan

Below are your recommendations in brief. All analysis and training days suggested within this document are estimated. Each analysis process for a module or function will help provide a clear picture of what will be needed specifically at the site to achieve goals identified within the Investment Analysis and those identified during module/function analysis. Training in all areas would include full version enhancements.

General Recommendations

a) Munis Upgrade and enhancement training
b) Evaluate Chart of Accounts and Segment structure
c) Review and test Org / Object and Long Account structure
d) Assess use of Budgetary Method 3 (GAAP / Budget Combined) rather than method 1 (GAAP)
e) Consider using Tyler Web Client and Dashboard
f) Evaluate set up and restriction using Role Based Securities and permissions
g) Encourage users to register with MUNIS to access training documents, Tyler Community, online class etc.
h) Review record retention policy and create purging schedule with input from site's auditor.
i) Use Tyler Content Manager
j) Explore TRS and Excel Cubes for future reporting needs
k) Review Bank Reconciliation and Utility Billing processing

Financial Recommendations

a) Review set up and use of Pooled / Treasury Fund concept
b) Review use of reporting templates
c) Utilizing MUNIS implementation assistant to review Multi-Year funds
d) Arrange Full Project Accounting / Ledger & Grant training
e) Visiting MUNIS NYBE Excel Ribbon to allow user to enter budget request from an Excel file and upload the request to MUNIS
f) Review permissions for budget override
g) Customize the Requisition Entry Screen to hide unwanted fields
h) Consider implementing E-Procurement
i) Consider Implementing Commodity Codes
j) Consider using the Bid Management module
k) Utilize the Inventory and Contract Management module
l) Use PO Receiving and the three way match in Accounts Payable
m) Evaluate decentralization of the AP invoice input function
n) Consider using Munis AP / Contract Retainage
o) Consider implementing Vendor Self Service – necessary for E-Procurement
p) Obtain Fixed Assets training
q) Use Treasury Management for Bank Reconciliation and cash projections

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Payroll & HR Investment Analysis
Findings and Recommendations

Las Cruces,NM

Table of Contents

1. Executive Summary 3
2. Process Recommendation
   A. General Recommendations 4
   B. Payroll/HR 4-8
3. Recommended Implementation Plan
   A. Payroll and HR 9

1. Executive Summary

A. Introduction

Tyler Technologies, Inc. (Tyler) conducted a Payroll and HR Investment Assessment for the Las Cruces, NM on 28 & 29 October 2014. The Payroll assessment covered processes within the City's Payroll & HR Departments. The purpose of the assessment is to understand current processes, how MUNIS is currently used and identify where MUNIS modules can be optimized to increase benefits to the City of Las Cruces, NM.

This is the first part of a two- part process for the MUNIS project with the City of Las Cruces. The first part consists of a current process assessment and recommendations; the second part is any assessment and/or training sessions associated with the recommendations adopted by the City of Las Cruces.

The City of Las Cruces may elect to adopt all, any, or none of the recommendations. Some of the recommendations in this report may require the purchase of additional modules, upgrades, and/or analysis/training days. Tyler will also provide a recommended implementation plan for the recommendations provided to City of Las Cruces, but they may implement the recommendations in any order they choose.

2. Process Recommendations

A. General Recommendations

1. Menu Security

Current Business Practice: End-users request limited numbers of reports from the payroll department.

Recommendation:

- Conduct menu security assessment for specific end users and confirm they can access the reports they need without requesting it through payroll department (Detail check history report- not including SSN on the report as well). Provide training to users to ensure that the user has the needed knowledge to run the report.
- Checked with payroll support and seems to be a known issue on the detail check history report to exclude SSN. Unfortunately we don't handle suppressing SSN globally in Munis. All of the category permissions have options for suppressing SSN within programs but that doesn't carry over to reports. Many reports have options to suppress SSN but it's up to the user to select it.
- MUN-105787 and MUN-10140 our ongoing incident numbers that you can follow up on.

Benefits: Quicker access to reports for end-users, less time by Payroll/HR Department processing reports for other departments.

2. Tyler Dashboard

Current Business Practice: The City of Las Cruces some users use the Tyler Dashboard system at this time.

Recommendations: Implement Tyler Dashboard for every user for City of Las Cruces.

Benefits: The Tyler Dashboard provides greater flexibility in menu customization as well as more role-specific programs, including web parts and Munis Central Programs which provide relevant, immediate information for decision-making.

3. Internal Business Procedures

Current Business Practice: There does not appear to be centralized system administration to guide assignment of responsibilities in the system and oversee global settings and codes.

Recommendation: Designate a specific person or function within the organization to oversee effective assignment of system responsibilities and development of global settings, codes and access.

Benefits: This will help Las Cruces make sure everything is getting done on time and done correctly when creating codes, employees, reports, etc within Munis.

B. Payroll/HR Recommendations

1. Employee Master:

Current Business Practice: Employee changes are input directly onto the Employee Master Records.

Recommendations: Implement Personnel Action Entry to record changes to the Employee Master.

Benefits: Using Personnel Action Entry to record changes to an employee record establishes the ability to control the timing of posting. Changes can be made in an action and posted when the effective date draws near. Personnel Actions Reporting is much more user friendly than trying to use the audit to determine when and what changes have been made to an employee. In addition, Workflow Business Rules can be applied tracking electronic approvals of salary changes, etc. before posted/made effective.

2. Employee Job/Salary

Current Business Practice: Employee Job/Salary is updated directly.

Recommendations: Make all changes through Personnel Actions.

Benefits: See #2 above

3. Health Insurance

Current Business Practice: Multiple deductions are set up for health insurance rather but those deductions are not using the Premium Table calc code.

Recommendations: Review and re-code the current deductions for Health Insurance automation.

Benefits: Re-coding deductions to utilize the Premium Table functionality will reduce redundancy and increase efficiency in payroll processing. When premiums change, only the premium table with a new effective date would need to be added as opposed to the current situation of needing to update each employee's deduction record. In addition, site can roll out Benefits Enrollment as part of Munis Self Service and employees can select their coverage of choice. This process would only require review and posting instead of manually changing the employee's choice

4. Payroll Processing

Current Business Practice: An indepth review and setup of Time Entry within payroll.

Recommendations: For Time entry - consider rolling out Time Entry to more departments and/or more end users, especially where the employees' base pay is set to calc code 01 – meaning they receive no pay unless hours are keyed. If the departments cannot have access to Munis Time Entry, create a Microsoft Excel spreadsheet that payroll can simply import into Time Entry.

Benefits: Using Time Entry reduces the burden on payroll staff during payroll processing and minimizes errors. In addition, Workflow Business Rules may be implemented for electronic approvals for the employee's pay, possibly eliminating the need for paper time sheets. Client may also consider implementing Time Entry within Employee Self Service. Employees can key their own hours and process an approval before being pulled into payroll.

5. Pay Codes

Current Business Practice: A review and setup of pay codes in the pay master module.

Recommendations: Start reviewing and considering how you pay different employees in Munis and see if that's the most efficient way to do so. Example holiday or overtime pay in Time Entry.

- Option 1 – Build additional and/or more pay codes with default account codes attached to them so the time entry end user picks a pay code when an account change happens during the payroll process.
- Option 2 – Re-train the time entry users on how to manually change the account codes on the pay codes in a given payroll so it gets charged correctly when it's posted to the general ledger.

Benefits: When implementing option 1 or 2 for the account changes will help reduce the number of journal entry correction that the client has to do each payroll.

6. Certifications

Current Business Practice: Client owns the HR Management modules but using the certification module.

Recommendations: Mapout and build the misc codes for type/area/level codes to setup the certifications records in Munis. Can import these records into the certification module within Munis.

Benefits: Munis HR modules provided numerous opportunities to track certification, expiration dates, and allows the employees to see their own certifications within ESS program.

7. Evaluations

Current Business Practice: City of Las Cruces currently doesn't use the evaluations program within Munis.

Recommendations: First, need to mapout and setup the correct codes to use evaluations in Munis. Also, would recommend using version 10.5 or newer because of the new functionally with the evaluation 360 program.

Benefits: This functionality enables employees with access to Employee Self Service to complete evaluations for themselves, their peers, and their managers all under one program.

8. Sick Bank Central

Current Business Practice: City of Las Cruces currently doesn't use the sick bank central program within Munis.

Recommendations: This maintenance program requires the setup of type codes, area codes, and time and date values in the Payroll Miscellaneous Codes program. If client wants to import from a third party program to keep records in Munis than would need to get conversions and/or business services departments involved to make this import work correctly.

Benefits: This functionality enables City of Las Cruces to track who and how much accrual time has been donated into the sick bank accrual. It also would be located in one Munis program easier to report and review at any given time.

9. Training Courses

Current Business Practice: In the HR menu there's a training course program that can be used for employees to sign up for training classes (via ESS) and receive certifications from completing the training classes. Example – Munis 101 training, Microsoft Word training, or CPR training class. City of Las Cruces currently doesn't use the training courses program within Munis and uses a third party software.

Recommendations: This maintenance program requires the setup of type codes, area codes, and time and date values in the Payroll Miscellaneous Codes program.

If client wants to import from a third party program to keep records in Munis than would need to get conversions and/or business services departments involved to make this import work correctly.

Benefits: This functionality enables employees with access to Employee Self Service to enroll in upcoming training courses and receive certifications from completing these training courses.

The employee training is mandated by some government agency or simply to keep your staff informed and trained on new software or new policies, the Munis Employee Training functionality is designed to help you manage and monitor internal and external training in the most efficient manner possible.

10. Driver's License

Current Business Practice: City of Las Cruces currently doesn't use the driver's license module within Munis.

Recommendations: Need to build codes such as types of license and endorsements within the driver's license module. If wanted to import into this program would need assistance with conversions team.

Benefits: This functionality enables the client to track different types of driver's licenses and track expiration dates within Munis. Also, allows the client to report from this module as well.

3. Recommended Implementation Plan

Below is the recommended steps needed to implement our recommendations. The total implementation time of each recommendation will be determined at a later date.

Conduct Menu Security Analysis

Engage Tyler Munis Implementation Services for assistance with Premium Tables, Personnel Actions, HR modules, or any item above or below, as needed.

Automate Health, Dental, and/or Vision Insurances using appropriate calculation codes and Premium Tables.

Implement Tyler Dashboard
- Purchase and install Tyler Dashboard
- Conduct Tyler Dashboard assessment
- Conduct Tyler Dashboard training

Implement Personnel Actions
- Conduct Personnel Actions analysis
- Conduct Personnel Actions training

Implement Munis HR Modules
- Conduct HR analysis
- Conduct HR training on those HR modules selected for use at the site

Utility Billing Investment Analysis Findings and Recommendations

City of Las Cruces, NM

Table of Contents

1. Executive Summary 3
2. Process Recommendation
   - A. General Recommendations 4
   - B. Payment Processing (Cashiering) 4
   - C. Master Programs (Customer Service& Solid Waste) 6
   - D. Service Order Management (New Connections) & Field Services 8
   - E. Interface Actions (Meter Reading) 9
   - F. Bill Processing (Billing) 10
   - G. Final Bill Processing 11
   - H. Meter/Flat Inventory Management 11
   - I. Periodic Process 12
   - J. Special Processing 12
   - K. Assessments 12
   - L. Collections Processing 13
   - M. Tyler Forms 13
   - N. Citizen Self Services 13
3. Recommended Implementation Plan 15

1. Executive Summary

A. Introduction

Tyler Technologies, Inc. (Tyler) conducted a Utility Billing Assessment for the City of Las Cruces, New Mexico on 17-18 March 2015. The purpose of the assessment is to understand current processes, how MUNIS is currently used and identify where MUNIS modules can be optimized to increase benefits to the City of Las Cruces.

This is the first part of a two- part process for the MUNIS project with the City of Las Cruces. The first part consists of a current process assessment and recommendations; the second part is any assessment and/or training sessions associated with the recommendations adopted by the City of Las Cruces. All analysis and training days suggested below are estimated. The analysis process for a module or function helps provide a clear picture of what will be needed specifically at the site.

The City of Las Cruces may elect to adopt all, any, or none of the recommendations. The recommendations in this report may require the purchase of additional modules, upgrades, and/or analysis/training days. Tyler will also provide a recommended implementation plan for the recommendations provided to City of Las Cruces, but they may implement the recommendations in any order they choose.

2. Process Recommendations

A. General Recommendations

1. Upgrade to Version 11.1

Current Business Practice: The City of Las Cruces is currently running version 9.4FF.

Recommendations: Upgrade to version 11.1 (the newest available version)

Benefits: Using the most current version of the software product with expanded Utility Billing functionality and fixes. The new features available in 11.1 will be highlighted throughout this document. Additionally version 11.1 is built on HTML 5 and will run on mobile devices.

Implementation: Functional Leaders Training/setup (4 days), End User Training (2 days).

2. Tyler Dashboard

Current Business Practice: The City of Las Cruces does not use the Tyler Dashboard at this time.

Recommendations: Implement Tyler Dashboard at City of Las Cruces.

Benefits: The Tyler Dashboard provides greater flexibility in menu customization as well as more role-specific programs. These include web parts and Munis Central Programs which provide relevant, immediate information for decision-making.

Implementation: Dashboard Analysis (1 day), Functional Leaders Training/setup (2 days), End User Training (1.5 day).

B. Payment Processing

1. Tyler Cashiering

Current Business Practice: The City of Las Cruces stopped using Tyler Cashiering because the internal IT department did not believe it they were in compliance with PCI.

Recommendation: The City of Las Cruces IT department should work with OSDBA and Tyler Cashiering development to find a solution for this.

Benefits: Tyler Cashiering does offer a Void Report

Implementation: Work with OSDBA, Functional Leaders Training/setup (1 day), End User Training (1 day).

2. **Credit Card Payments**

   Current Business Practice: Credit card payments are currently processed from an external system with no integration into Munis.

   Recommendation: Use Tyler Cashiering

   Benefits: Simplification of payment processing for cashiers

   Implementation: Will be incorporated into the Tyler Cashiering time.

3. **Miscellaneous Receipts from Satellite Offices**

   Current Business Practice: External sources are depositing funds into the bank and the City of Las Cruces is making manual journal entries daily to track.

   Recommendation: Using Tyler Cashiering establish an 'Office' for each satellite office to receipt in their entries. Miscellaneous charge codes will need to be established.

   Benefits: By having each office entering their miscellaneous charges this will build an audit trail, provide reporting and create a separation in duties between the payment entry level and posting to the general ledger.

   Implementation: Will be incorporated into the Tyler Cashiering time.

4. **AR Category Specific Settings**

   Current Practice: The City of Las Cruces is currently not utilizing the Reversals functionality built into the Accounts Receivable Category Specific Settings. If an account should be cash only it is only found by manually reviewing the number of NSF special conditions on an account.

   Recommendation: Use the NSF parameters from AR Category Specific Settings to automate the check reversal for NSF process.

   Benefit: The system will default in the charge code to be added to the customer's bill for the NSF fee, add an NSF special condition to be used to track and maintain the number of allowable NSF's before being placed on a Cash Only status. In version 11.1 the Cash Only special condition code will prevent all other payment types in payment entry.

   Implementation: Ideally combined with other Payment Processing recommendations Functional Leader Training (.5 days)

C. Master Programs

1. New Account Setup – Customer Applications

Current Business Practice: Customer application data – route, account, start dates, meter numbers etc. are being manually keyed onto a PDF for the new applicant to sign. These take about 15 minutes per account to complete.

Recommendations: Create a "New Customer Application' template to be used from the services screen to automatically populate this data to a mail merge form to be signed by the new applicant.

Benefits: Save time by using the system populate the data on the new customer application.

Implementation: No additional implementation time necessary for this recommendation.

2. Service Factor

Current Business Practice: The service factor field is used for the Gas service bill calculation. This charge has a based on other charged attached to it which must also store and maintain the same service factor.

Recommendations: In version 11.1 and above has a feature to direct the bill calculation to use the calculated usage instead of the actual usage.

Benefits: The service factor would not need to be maintained on the based on other charges.

Implementation: Functional Leaders Training/setup (.5 days), End User Training (.5 day).

3. AR Customers Records

Current Business Practice: When setting up a new customer it is the business practice to search for an existing AR Customer record to determine if there is a prior balance or a written off balance. The difficulty with this is there are several duplicate AR Customer records.

Recommendations: Utilize the AR Customer merge program to clean up duplicate AR customer records when found.

Benefits: Less duplicate AR Customer records.

Implementation: No additional implementation time.

4. **Deposits**

Current Business Practice: Client is finding they need more visibility to when deposits have been applied and refunded.

Recommendations: Version 11.1 has expanded Deposits screen displaying the deposit collected, applied and refunded amounts. Additionally a new tab has been added for the deposit events records which include deposits being paid, applied, reversed, applied a second time and partial refunds. The deposits screen can also be exported to excel in this version.

Benefits: More visibility to deposits

Implementation: Can be incorporated into time established for upgrading.

5. **Revert to Owner**

Current Business Practice: The City of Las Cruces is using the Owner Relation status for Landlords to allow them to use the revert to owner feature as that is used more often. Because the owner is not truly the owner of the property they have to look at the stop dates and the developmental fee's to determine the owner.

Recommendation: Request a software enhancement to add the ability to 'Revert to Landlord'.

Benefits: Store both an owner and a landlord on an account and having the ability to revert services back to either. This will give visibility to both the owner and a landlord on a property location.

Implementation: To be determined with enhancement request.

6. **Create Pending w/Vacant and Delete Pending**

Current Business Practice: The City of Las Cruces does not currently have this functionality in version 9.4FF

Recommendations: Move to version 11.1 of software

Benefits: Two enhancements have been added to the utilities screen to help with customers moving in and out. The create pending with vacant button will move in a vacant CID when no new customer is known. The delete pending button will delete the pending record and all of its related utilities, set the dates back on the current CID and uncheck the final flags on the services. Using the feature will also promote you to maintain the service order and any miscellaneous fee's created.

Implementation: Can be incorporated into time established for upgrading Functional and End User training.

7. **Solid Waste Service Database**

Current Business Practice: A separate database is being used to store route and pickup schedules for the solid waste service. Customer service has found it timely to drill into munis to find this information. Because of this the customer service representatives are maintaining information in two systems. Additionally this second database is being used because the same container number can be attached to multiple accounts in Munis.

Recommendations: Create User Defined fields at the Account level to store the route and pick schedules. Have professional services pull this information from the fixed inventory screens and populated the new user defined fields for the route and pickup day.

Benefits: By making these changes to store all Solid Waste information in Munis there will be no need to maintain a separate database. This will give customer service one system to house all Solid Waste information. They will only need to maintain the 'Disability' flag or approvals to move to different container sizes in one system. This cuts down on duplicate entry and discrepancies between two systems. When a manufacture is stored with a container number the software will prevent a duplicate container number from being used.

Implementation: Professional Services (TBD with request) Functional Leaders Training/setup (1 day), End User Training (1 day).

D. Service Order Management

1. **Service Order Form**

Current Business Practice: After a create pending is processed the Service order is manually adjusted to change the primary meter service to gas in order to print the consumption history for gas on the service order. The Schedule date is also being updated to match the pending date not the date created.

Recommendations: Submit for an enhancements: 1- to include consumption history for all metered services on a service order, 2 – Add the schedule date to the SO section on the create pending screen.

Benefits: These enhancements would eliminate timely manual adjustments to the service orders for each create pending and leave less room for clerical errors.

Implementation: To be determined with enhancement request.

2. **Service Order Fee's**

Current Business Practice: Miscellaneous fees are being added to accounts after the completion of a service order manually.

Recommendations: Set up Service Order Fee's to be added automatically to the account after the completion of a service order.

Benefits: Automation of adding the miscellaneous fee's to an account.

Implementation: Functional Leaders Training/setup (.5 days), End User Training (.5 day).

3. **Automatic Creation of Service Orders**

   Current Business Practice: From Exception rules service orders were automatically being created for high readings. This has caused over 300,000 service orders to have been opened with no intention of processing.

   Recommendations: Determine if these service orders can be isolated with in service order management and deleted. If unable to remove these service orders manually from the system I would recommend working with support or professional services to get these erroneous service orders purged.

   Benefits: Will be able to utilize the service order status for tracking service orders as intended in the system.

   Implementation: No additional time for implementation.

4. **Service Order Management Rules**

   Current Business Practice: Individual departments are reasonable for entering and maintaining their own service orders. Service orders are assigned at the point of creation to a department.

   Recommendations: Create a business process that will set responsibility for searching and following up on uncompleted service orders.

   Benefits: By setting this rule there is a check in place that is preventing service orders from being missed.

   Implementation: No additional time for implementation.

E. <u>Interface Actions</u>

1. **Export to Handhelds for Finals**

   Current Business Practice: Final readings are not currently exported to the handhelds for readings.

   Recommendations: Use the export for final readings functionality available in version 10.5 and above.

   Benefits: Final readings can be exported to the handheld devices for readings which creates an import file to record the readings munis. This will eliminate the need to create a service order to obtain final readings and manually entering the final readings into Munis.

   Implementation: Can be incorporated into time established for upgrading Functional and End User training.

2. **High/Low Readings**

Current Business Practice: Munis is not being used to flag high or low readings because they have not been able to understand the system calculations.

Recommendations: Work with implementation consultant or support to review the calculation being done to set the high/low thresholds being used by Munis.

Benefits: Understanding how to set the high/low thresholds will allow Las Cruces to utilize existing functionality of the Munis system. These thresholds can be set at the rate master level allowing customization in this calculation to set apart residential, commercial or industrial high or low warnings.

Implementation: Functional Leaders Training/setup (.5 days), End User Training (.5 day).

F. Bill Processing

1. Default Due Dates

Current Business Practice: The City of Las Cruces is currently manually entering due dates during the bill run process.

Recommendations: Complete the Default Due Date Options table from Bill Run Setup.

Benefits: The system will automatically populate the Mail, Due, Penalty, Delinquent, Shutoff, and Lien date for each bill run. You are able to override these dates in billing if necessary.

Implementation: No additional Implementation time necessary.

2. Post Billing Process Options

Current Business Practice: The City of Las Cruces is not utilizing any automated processes from the bill run.

Recommendations: Version 10.5 and above has functionality to automate post billing processes such as late fee's, Delinquent Notices, Cutoff Selection and EFT files.

Benefits: Automation of these processes will free up the time spent manually running them. Consistence can be established for both the define criterial used and the time each process is run.

Implementation: Functional Leaders Training/setup (1 day), End User Training (1 day).

G. Final Billing

1. Refund Deposit Interest

Current Business Practice: Deposit interest is not being refunded within the final bill run.

Recommendations: Upgrading to version 10.5 or above will give the City of Las Cruces the ability to refund deposit interest from within the final bill run.

Benefits: Being able to create the final bill with calculated deposit interest to be refunded from one process.

Implementation: Can be incorporated into time established for upgrading Functional and End User training.

H. Meter/Flat Inventory Management

1. Meter Inventory Import/Copy

Current Business Practice: Meters are being entered into inventory as needed with each meter change out.

Recommendations: If possible obtain an electronic file of the meters purchased in bulk from the vendor. This electronic file can be converted into a Meter Import file. If an electronic file is not available I would recommend using the meter copy feature to mass create meters into inventory.

Benefits: Meters will be part of the electronic inventory within Munis available for reporting and meter exchanges.

Implementation: Functional Leaders Training/setup (.5 day), End User Training (.5 day).

2. Duplicate ERT numbers

Current Business Practice: With version 9.4 of Munis there is no validation preventing duplicate ERT numbers from being used.

Recommendations: Upgrade to version 11.1 or above to use new functionality to prevent duplication of ERT numbers between accounts.

Benefits: Ability to prevent a duplicate ERT number which will save timely billing issues.

Implementation: Can be incorporated into time established for upgrading Functional and End User training.

I. Periodic Process

1. Cutoff Process

Current Business Practice: The City of Las Cruces is not currently selecting customers for cutoff using the commit number, not opting to create an account event history record or add a special condition to the account

Recommendations: Additional training high lighting the new features of the cutoff process and the intended functionality.

Benefits: There have been enhancements to the cutoff program in the newest version of the software including the ability to apply fees after the original selection criteria are built. There would be value in Las Cruces seeing the new features and how this program can be maximized.

Implementation: Functional Leaders Training/setup (.5 day), End User Training (.5 day).

J. Special Processing

1. Budget Plans

Current Business Practice: Using the Budget program in version 9.4 all services are not able to be included in a budget program. This is causing customer to stop using the budget program as the bill amount is still inconsistent.

Recommendations: In the latest version of the software the budget program has expanded functionality that allows for a range of charge codes including sales tax and flat charges to be included in the budget.

Benefits: Consistent budget amount month for customers.

Implementation: Can be incorporated into time established for upgrading Functional and End User training.

K. Assessments

1. Assessments for Development Fee's

Current Business Practice: Currently Assessments are set up for Principal and interest to be recognized as billed. However the City of Las Cruces is interested in seeing the new Assessment options.

Recommendations: Additional training high lighting the new Assessment options and enhancements to the Account Customer Inquiry screen.

Benefits: To see the new GL options for Assessments and information now populated on the Account Customer Inquiry screen.

Implementation: Functional Leaders Training/setup (.5 day), End User Training (.5 day).

L. Collections Processing

1. Charge Code Groups

Current Business Practice: The City of Las Cruces is not currently using charge code groups.

Recommendations: From AR Miscellaneous codes create charge code groups to be linked to each charge code.

Benefits: The charge code group allows an additional level of classification at the charge code level. By creating a charge group for each AR account fund it can be helpful when trying to reconcile as certain reports in Munis can be run to total by Charge Code Group.

Implementation: Functional Leaders Training/setup (.5 day), End User Training (.5 day).

M. Tyler Forms

1. Billing Statements

Current Business Practice: The City of Las Cruces utility billing statements are printed by a third party printer vendor. Data manipulation is being done by the print vendor which has not been programed in munis causing the two forms not to match.

Recommendations: Work with Tyler Forms to align the forms between Munis and the print vendor.

Benefits: Tyler forms integration with Tyler Content Manager and Citizen Self Service. When a statement is printed from Munis it will automatically archive TCM which is accessible to internal munis users and for citizens when connected to Citizen Self Service. Citizen will be able to view and reprint copies of their statements without needing to contact a city customer services representative.

Implementation: Functional Leaders Training/setup (1 day), End User Training (.5 day) for TCM and Citizen Self Service setup, Tyler Forms (TBD).

N. Citizen Self Service

1. Reprinting Statements

Current Business Practice: There is currently no ability for a citizen to reprint their bill on-line.

Recommendations: Enable a TCM document link from Citizen Self Services for citizens to view and reprint their bills.

Benefits: Citizens are able to independently access and reprint their billing statements.

Implementation: Can be incorporated into time established for Tyler Forms Functional and End User training.

2. Citizen Request

3. Recommended Implementation Plan

Below is the recommended steps needed to implement our recommendations. The total implementation time of each recommendation will be determined at a later date.

A. General

- Upgrade to version 11.1 of Munis
  - Upgrade Test environment
  - Conduct Testing on all processes
  - Conduct Functional and End User Training

- Implement Tyler Dashboard
  - Purchase and install Tyler Dashboard
  - Conduct Dashboard Analysis with IT and Munis Security Administrator
  - Conduct Tyler Dashboard training
  - Train end users on Tyler Dashboard

- Implement Tyler Content Management
  - Purchase and install Tyler Content Management
  - Conduct Tyler Content Management Analysis
  - Conduct Tyler Content Management training
  - Train end users on Tyler Dashboard

B. Payment Processing

1. Tyler Cashiering
   - Work with OSDBA to get Tyler Cashiering PCI compliant
   - Engage Tyler Implementation Training on Setup and Processing review

2. Credit Card Payments
   - Using Tyler Cashiering Credit Card Payments will be processed in TC.

3. Miscellaneous Receipts from Satellite Offices
   - Engage Tyler Implementation Training on setting up Offices and End User Training for satellite offices.
   - Setup Miscellaneous charge codes to be used by satellite offices.

4. AR Category Specific Settings
   - Set up AR Category Specific Settings for NSF processing
   - Conduct End User training on new processing steps and functionality

C. Master Programs

1. New Account Setup – Customer Applications
   - Create Customer Application mail merge template
   - Conduct Customer Service End User training on using new form.

2. Service Factor
    - Upgrade to Version 11.1
    - Engage Tyler Implementation Training on new functionality.

3. AR Customer Records
    - Appoint persons responsible for routinely running the Customer Merge program.
    - Engage Tyler Implementation Training for the Customer Merge programs

4. Deposits
    - Upgrade to Version 11.1
    - Engage Tyler Implementation Training on new functionality.

5. Revert to Owner
    - Submit for software enhancement

6. Create Pending w/Vacant and Delete Pending
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.

7. Solid Waste Service Database
    - Engage Tyler Implementation for training on Flat Inventory
    - Engage Professional Services to transfer Route and Pickup information to a new user defined field.
    - Conduct End User training on new process flow.

D. Service Order Management

1. Service Order Form
    - Submit for software enhancements

2. Service Order Fee's
    - Engage Tyler Implementation Training on for setup and Functional Leaders training.
    - Conduct End User training.

3. Automatic Creation of Service Orders
    - Engage Tyler Professional Services to remove erroneous service order records.

4. Service Order Management Rules
    - Create business rule that establishes responsibility searching for unassigned or uncompleted service orders.

E. Interface Actions

1. Export to Handhelds for Finals
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.

F. Bill Processing

1. Default Due Dates
    - Engage Tyler Implementation for training on setup
    - Conduct End User Training

2. Post Billing Processes
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

G. Final Billing

1. Refund Deposit Interest
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

H. Meter/Flat Inventory Management

1. Meter Inventory Import / Copy
    - Engage Tyler Implementation Training
    - Conduct End User Training

2. Duplicate ERT Numbers
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

I. Periodic Process

1. Cutoff Process
    - Engage Tyler Implementation Training
    - Determine if able to incorporate new functionality
    - Conduct End User Training

J. Special Processing

1. Budget Plans
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

K. Assessments

1. Budget Plans
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.

L. Collections Processing

1. Charge Code Groups
    - Setup Charge Code Groups
    - Explore Reporting options for Charge Code Groups

M. Tyler Forms

1. Billing Statements
    - Engage Tyler Forms to align the forms between Munis and vendor
    - Integrate with Tyler Content Manager for viewing forms from Munis and Citizen Self Service.

N. Citizen Self Services

1. Reprinting Statements
    - Integrate with Tyler Content Manager for viewing and reprinting statements from Citizen Self Service.
    - Engage Tyler Implementation Training for setup

2. Citizen Request
    - Upgrade to Version 11.1
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

3. Customer Information and EFT
    - Engage Tyler Implementation for training on new functionality.
    - Conduct End User training.

Exhibit L - Tyler Security Policy

Tyler's application Network Application Network Dependencies and Application Compliance Survey provided on or about July 27, 2015 incorporated by reference. Both documents are confidential and shall not be disclosed unless authorized by Tyler.

Exhibit M - Escrow Agreement

See following pages.

EFFECTIVE DATE: Sept. 29, 2008
MASTER DEPOSIT ACCOUNT NUMBER: 34953

THREE-PARTY MASTER DEPOSITOR ESCROW SERVICE AGREEMENT

1. **Introduction.**

This Three-Party Master Depositor Escrow Service Agreement (the "**Agreement**") is entered into by and between Tyler Technologies, Inc., ("**Depositor**"), and by any additional party enrolling as a "**Beneficiary**" upon execution of the Beneficiary Enrollment Form attached as Exhibit E to this Agreement and by Iron Mountain Intellectual Property Management, Inc. ("**Iron Mountain**"). Beneficiary, Depositor, and Iron Mountain may be referred to individually as a "Party" or collectively as the "Parties" throughout this Agreement.

(a) The use of the term "services" in this Agreement shall refer to Iron Mountain services that facilitate the creation, management, and enforcement of software or other technology escrow accounts as described in Exhibit A attached hereto ("**Services**"). A Party shall request Services under this Agreement by submitting a work request for certain Iron Mountain Services ("**Work Request**") via written instruction or the online portal maintained at the website located at www.ironmountainconnect.com or other websites owned or controlled by Iron Mountain that are linked to that website (collectively the "**Iron Mountain Website**").

(b) The Beneficiary and Depositor have, or will have, entered into a license agreement or other agreement conveying intellectual property rights to the Beneficiary ("**License Agreement**"), and the Parties intend this Agreement to be considered as supplementary to the License Agreement, pursuant to Title 11 United States [Bankruptcy] Code, Section 365(n).

2. **Depositor Responsibilities and Representations.**

(a) Depositor shall make an initial deposit that is complete and functional of all proprietary technology and other materials covered under this Agreement ("**Deposit Material**") to Iron Mountain within thirty (30) days of the Effective Date. Depositor may also update Deposit Material from time to time during the Term of this Agreement provided a minimum of one (1) complete and functional copy of Deposit Material is deposited with Iron Mountain at all times. At the time of each deposit or update, Depositor will provide an accurate and complete description of all Deposit Material sent to Iron Mountain via the Iron Mountain Website or using the form attached hereto as Exhibit B.

(b) Depositor represents that it lawfully possesses all Deposit Material provided to Iron Mountain under this Agreement free of any liens or encumbrances as of the date of their deposit. Any Deposit Material liens or encumbrances made after their deposit will not prohibit, limit, or alter the rights and obligations of Iron Mountain under this Agreement. Depositor warrants that with respect to the Deposit Material, Iron Mountain's proper administration of this Agreement will not violate the rights of any third parties.

(c) Depositor represents that all Deposit Material is readable and useable in its then current form; if any portion of such Deposit Material is encrypted the necessary decryption tools and keys to read such material are deposited contemporaneously.

(d) Depositor agrees, upon request by Iron Mountain, in support of Beneficiary's request for verification Services, to promptly complete and return the Escrow Deposit Questionnaire attached hereto as Exhibit Q. Depositor consents to Iron Mountain's performance of any level(s) of verification Services described in Exhibit A attached hereto and Depositor further consents to Iron Mountain's use of a subcontractor to perform verification Services. Any such subcontractor shall be bound by the same confidentiality obligations as Iron Mountain and shall not be a direct competitor to either Depositor or Beneficiary. Iron Mountain shall be responsible for the delivery of Services of any such subcontractor as if Iron Mountain had performed the Services. Depositor represents that all Deposit Material is provided with all rights necessary for Iron Mountain to verify such proprietary technology and materials upon receipt of a Work Request for such Services or agrees to use commercially reasonable efforts to provide Iron Mountain with any necessary use rights or permissions to use materials necessary to perform verification of the Deposit Material. Depositor agrees to reasonably cooperate with Iron Mountain by providing reasonable access to its technical personnel for verification Services whenever reasonably necessary.

3. **Beneficiary Responsibilities and Representations.**

(a) Beneficiary acknowledges that, as between Iron Mountain and Beneficiary, Beneficiary assumes all responsibility for the completeness and functionality of all Deposit Material.

(b) Beneficiary may submit a verification Work Request to Iron Mountain for one of more of the Services defined in Exhibit A attached hereto and further consents to Iron Mountain's use of a subcontractor if needed to provide such

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Services. Beneficiary warrants that Iron Mountain's use of any materials supplied by Beneficiary to perform the verification Services described in Exhibit A is lawful and does not violate the rights of any third parties.

4. **Iron Mountain Responsibilities and Representations.**

(a) Iron Mountain agrees to use commercially reasonable efforts to provide the Services requested by Authorized Person(s) (as identified in the "Authorized Person(s)/Notices Table" below) representing the Depositor and Beneficiary in a Work Request. Iron Mountain may reject a Work Request (in whole or in part) that does not contain all required information at any time upon notification to the Party originating the Work Request.

(b) Iron Mountain will conduct a visual inspection upon receipt of any Deposit Material and associated Exhibit B. If Iron Mountain determines that the Deposit Material does not match the description provided by Depositor represented in Exhibit B attached hereto, Iron Mountain will notify Depositor of such discrepancies and notate such discrepancy on the Exhibit B.

(c) Iron Mountain will provide notice to the Beneficiary of all Deposit Material that is accepted and deposited into the escrow account under this Agreement.

(d) Iron Mountain will work with a Party who submits any verification Work Request for Deposit Material covered under this Agreement to either fulfill any standard verification Services Work Request or develop a custom Statement of Work ("SOW"). Iron Mountain and the requesting Party will mutually agree in writing to a SOW on the following terms and conditions that include but are not limited to: description of Deposit Material to be tested; description of verification testing; requesting Party responsibilities; Iron Mountain responsibilities; Service Fees; invoice payment instructions; designation of the paying Party; designation of authorized SOW representatives for both the requesting Party and Iron Mountain with name and contact information; and description of any final deliverables, prior to the start of any fulfillment activity. After the start of fulfillment activity, each SOW may only be amended or modified in writing with the mutual agreement of both Parties, in accordance with the change control procedures set forth therein.

(e) Iron Mountain will hold and protect all Deposit Material in physical or electronic vaults that are either owned or under the control of Iron Mountain, unless otherwise agreed to by the Parties.

(f) Upon receipt of written instructions by Depositor, Iron Mountain will permit the replacement or removal of previously submitted Deposit Material.

(g) Iron Mountain will return the Deposit Material to Depositor upon termination of this Agreement. If reasonable attempts to return the Deposit Material to Depositor are unsuccessful, Iron Mountain shall destroy the Deposit Material.

5. **Payment.**

The Party responsible for payment designated in Exhibit A ("Paying Party") shall pay to Iron Mountain all fees as set forth in the Work Request ("**Service Fees**"). Except as set forth below, all Service Fees are due to Iron Mountain within forty-five (45) calendar days from the date of invoice in U.S. currency and are non-refundable. Iron Mountain may update Service Fees with a ninety (90) calendar day written notice to the Paying Party during the Term of this Agreement. Iron Mountain shall not increase Service Fees by more than eight percent (8%) per year. The Paying Party is liable for any taxes related to Services purchased under this Agreement or shall present to Iron Mountain an exemption certificate reasonably acceptable to the taxing authorities. Applicable taxes shall be billed as a separate item on the invoice, to the extent possible. Any undisputed Service Fees not collected by Iron Mountain when due shall bear interest until paid at a rate of one percent (1%) per month (12% per annum) or the maximum rate permitted by law, whichever is less. Notwithstanding, the non-performance of any obligations of Depositor to deliver Deposit Material under the License Agreement or this Agreement, Iron Mountain is entitled to be paid all Service Fees that accrue during the Term of this Agreement

6. **Term and Termination.**

(a) The initial "**Term**" of this Agreement is for a period of one (1) year from the Effective Date ("**Initial Term**") and will automatically renew for additional one (1) year terms (each a "Renewal Term") and continue in full force and effect until one of the following events occur: (i) Depositor provides Iron Mountain with sixty (60) days' prior written notice of its intent to cancel this Agreement; (ii) Beneficiary provides Iron Mountain and Depositor with sixty (60) days' prior written notice of their intent to terminate this Agreement; (iii) the Agreement terminates under another provision of this Agreement; or (iv) any time after the Initial Term, Iron Mountain provides one hundred eighty (180) days prior written notice to the Depositor and Beneficiary of Iron Mountain's intent to terminate this Agreement During this notice period, Iron Mountain's Service Fees shall be paid by the Paying Party. If the Effective Date is not specified above, then the last date noted on the signature blocks of this Agreement shall be the Effective Date.

(b) Unless the express terms of this Agreement provide otherwise, upon termination of this Agreement, Iron Mountain shall return the Deposit Material to the Depositor. If reasonable attempts to return the Deposit Material to Depositor are unsuccessful, Iron Mountain shall destroy the Deposit Material.

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(c) In the event of the nonpayment of undisputed Service Fees owed to Iron Mountain, Iron Mountain shall provide all Parties to this Agreement with written notice of Iron Mountain's intent to terminate this Agreement. Any Party to this Agreement shall have the right to make the payment to Iron Mountain to cure the default. If the past due payment is not received in full by Iron Mountain within forty-five (45) calendar days of the date of such notice, then Iron Mountain shall have the right to terminate this Agreement at any time thereafter by sending written notice to all Parties. Iron Mountain shall have no obligation to take any action under this Agreement (except to those obligations that survive termination of this Agreement) so long as any undisputed Service Fees due Iron Mountain under this Agreement remain unpaid.

7. **General Indemnity.**

Subject to Section 10 and 11, each Party shall defend, indemnify and hold harmless the others, their corporate affiliates and their respective officers, directors, employees, and agents and their respective successors and assigns from and against any and all claims, losses, liabilities, damages, and expenses (including, without limitation, reasonable attorneys' fees), arising under this Agreement from the negligent or intentional acts or omissions of the indemnifying Party or its subcontractors, or the officers, directors, employees, agents, successors and assigns of any of them.

8. **Warranties.**

(a) IRON MOUNTAIN WARRANTS ANY AND ALL SERVICES PROVIDED HEREUNDER SHALL BE PERFORMED IN A WORKMANLIKE MANNER. EXCEPT AS SPECIFIED IN THIS SECTION, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, AGAINST INFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED TO THE EXTENT ALLOWED BY APPLICABLE LAW. AN AGGRIEVED PARTY MUST NOTIFY IRON MOUNTAIN PROMPTLY OF ANY CLAIMED BREACH OF ANY WARRANTIES AND SUCH PARTY'S SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY SHALL BE RETURN OF THE PORTION OF THE FEES PAID TO IRON MOUNTAIN BY PAYING PARTY FOR SUCH NON-CONFORMING SERVICES. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY AND LIMITED REMEDY SET FORTH ABOVE FAILS OF ITS ESSENTIAL PURPOSE. THE WARRANTY PROVIDED IS SUBJECT TO THE LIMITATION OF LIABILITY SET FORTH IN THIS AGREEMENT.

(b) Depositor warrants that all Depositor Information provided hereunder is accurate and reliable and undertakes to promptly correct and update such Depositor Information during the Term of this Agreement.

(c) Beneficiary warrants that all Beneficiary information provided hereunder is accurate and reliable and undertakes to promptly correct and update such Beneficiary Information during the Term of this Agreement.

(d) Ownership Warranty. Depositor warrants that it is the owner or legal custodian of the Deposit Material and has full authority to store the Deposit Material and direct their disposition in accordance with the terms of this Agreement. Depositor shall reimburse Iron Mountain for any expenses reasonably incurred by Iron Mountain (including reasonable legal fees) by reason of Iron Mountain's compliance with the instructions of Depositor in the event of a dispute concerning the ownership, custody or disposition of Deposit Material stored by Depositor with Iron Mountain.

9. **Confidential Information.**

Iron Mountain shall have the obligation to reasonably protect the confidentiality of the Deposit Material. Except as provided in this Agreement Iron Mountain shall not use or disclose the Deposit Material. Iron Mountain shall not disclose the terms of this Agreement to any third party. If Iron Mountain receives a subpoena or any other order from a court or other judicial tribunal pertaining to the disclosure or release of the Deposit Material, Iron Mountain will immediately notify the Parties to this Agreement unless prohibited by law. After notifying the Parties, Iron Mountain may comply in good faith with such order. It shall be the responsibility of Depositor or Beneficiary to challenge any such order; provided, however, that Iron Mountain does not waive its rights to present its position with respect to any such order. Iron Mountain will cooperate with the Depositor or Beneficiary, as applicable, to support efforts to quash or limit any subpoena, at such party's expense. Any Party requesting additional assistance shall pay Iron Mountain's standard charges or as quoted upon submission of a detailed request.

10. **Limitation of Liability.**

NOTWITHSTANDING ANYTHING ELSE IN THIS AGREEMENT, ALL LIABILITY, IF ANY, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, OF ANY PARTY TO THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT EQUAL TO ONE YEAR OF FEES PAID OR OWED TO IRON MOUNTAIN UNDER THIS AGREEMENT. IF CLAIM OR LOSS IS MADE IN RELATION TO A SPECIFIC DEPOSIT OR DEPOSITS, SUCH LIABILITY SHALL BE LIMITED TO THE FEES RELATED SPECIFICALLY TO SUCH DEPOSITS. THIS LIMIT SHALL NOT APPLY TO ANY PARTY FOR: (I) ANY CLAIMS OF

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INFRINGEMENT OF ANY PATENT, COPYRIGHT, OR TRADEMARK; (II) LIABILITY FOR DEATH OR BODILY INJURY; (III) PROVEN THEFT; OR (IV) PROVEN GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

11. **Consequential Damages Waiver.**

IN NO EVENT SHALL ANY PARTY TO THIS AGREEMENT BE LIABLE TO ANOTHER PARTY FOR ANY INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, LOST PROFITS OR LOST DATA OR INFORMATION, ANY COSTS OR EXPENSES FOR THE PROCUREMENT OF SUBSTITUTE SERVICES, OR ANY OTHER INDIRECT DAMAGES, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE EVEN IF THE POSSIBILITY THEREOF MAY BE KNOWN IN ADVANCE TO ONE OR MORE PARTIES.

12. **General.**

(a) Incorporation of Work Requests. All valid Depositor and Beneficiary Work Requests are incorporated into this Agreement.

(b) Purchase Orders. In the event that the Paying Party issues a purchase order or other instrument used to pay Service Fees to Iron Mountain, any terms and conditions set forth in the purchase order which constitute terms and conditions which are in addition to those set forth in this Agreement or which establish conflicting terms and conditions to those set forth in this Agreement are expressly rejected by Iron Mountain.

(c) Right to Make Copies. Iron Mountain shall have the right to make copies of all Deposit Material as reasonably necessary to perform the Services. Iron Mountain shall copy all copyright, nondisclosure, and other proprietary notices and titles contained on Deposit Material onto any copies made by Iron Mountain. Any copying expenses incurred by Iron Mountain as a result of a Work Request to copy will be borne by the Party requesting the copies. Iron Mountain may request Depositor's reasonable cooperation in promptly copying Deposit Material in order for Iron Mountain to perform Services.

(d) Choice of Law. The validity, interpretation, and performance of this Agreement shall be controlled by and construed under the laws of the State of Texas, United States of America, as if performed wholly within the state and without giving effect to the principles of conflicts of laws.

(e) Authorized Person(s). Depositor and Beneficiary must each authorize and designate one person whose actions will legally bind such party ("Authorized Person(s)" who shall be identified in the Authorized Person(s) Notices Table of this Agreement) and who may manage the Iron Mountain escrow account through the Iron Mountain Website or written instruction. The Authorized Person(s) for each the Depositor and Beneficiary will maintain the accuracy of their name and contact information provided to Iron Mountain during the term of this Agreement.

(f) Right to Rely on Instructions. Iron Mountain may act in reliance upon any instruction, instrument, or signature reasonably believed by Iron Mountain to be genuine and from an Authorized Person(s), officer, or other employee of a Party. Iron Mountain may assume that such representative of a Party to this Agreement who gives any written notice, request, or instruction has the authority to do so. Iron Mountain will not be required to inquire into the truth or evaluate the merit of any statement or representation contained in any notice or document reasonably believed to be from such representative. With respect to Release and Destruction of Deposit Materials, Iron Mountain shall rely on an Authorized Person(s).

(g) Force Majeure. No Party shall be liable for any delay or failure in performance due to events outside the defaulting Party's reasonable control, including without limitation acts of God, earthquake, labor disputes, shortages of supplies, riots, war, acts of terrorism, fire, epidemics, or delays of common carriers or other circumstances beyond its reasonable control. The obligations and rights of the excused Party shall be extended on a day-to-day basis for the time period equal to the period of the excusable delay.

(h) Notices. All notices regarding Exhibit C (release) shall be sent by commercial express mail or other commercially appropriate means that provide prompt delivery and require proof of delivery. All other correspondence, including invoices, payments, and other documents and communications, may be sent electronically or via regular mail. The Parties shall have the right to rely on the last known address of the other Parties. Any correctly addressed notice to last known address of the other Parties that is relied on herein that is refused, unclaimed, or undeliverable because of an act or omission of the Party to be notified as provided herein shall be deemed effective as of the first date that said notice was refused, unclaimed, or deemed undeliverable by electronic mail, the postal authorities by mail, through messenger or commercial express delivery services.

(i) No Waiver. No waiver of rights under this Agreement by any Party shall constitute a subsequent waiver of this or any other right under this Agreement.

(j) Assignment. No assignment of this Agreement by Depositor or Beneficiary or any rights or obligations of Depositor or Beneficiary under this Agreement is permitted without the written consent of Iron Mountain, which shall not be

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unreasonably withheld or delayed, provided, however, Depositor may, without the prior written consent of Iron Mountain, assign this Agreement in its entirety to the surviving entity of any merger or consolidation or to any purchaser of substantially all of the Depositor's assets. Iron Mountain shall have no obligation in performing this Agreement to recognize any successor or assign of Depositor or Beneficiary unless Iron Mountain receives clear, authoritative and conclusive written evidence of the change of parties. No assignment of this Agreement by Iron Mountain or any rights or obligation of Iron Mountain under this Agreement is permitted without the written consent of Depositor, which shall not be unreasonably withheld or delayed, provided, however, that Depositor's consent shall not be required for any assignment of this Agreement to an Iron Mountain subsidiary or other Iron Mountain entity.

(k) Severability. In the event any of the terms of this Agreement become or are declared to be illegal or otherwise unenforceable by any court of competent jurisdiction, such term(s) shall be null and void and shall be deemed deleted from this Agreement. All remaining terms of this Agreement shall remain in full force and effect. If this paragraph becomes applicable and, as a result, the value of this Agreement is materially impaired for any Party, as determined by such Party in its sole discretion, then the affected Party may terminate this Agreement by written notice to the others.

(l) Independent Contractor Relationship. Depositor and Beneficiary understand, acknowledge, and agree that Iron Mountain's relationship with Depositor and Beneficiary will be that of an independent contractor and that nothing in this Agreement is intended to or should be construed to create a partnership, joint venture, or employment relationship.

(m) Attorneys' Fees. In any suit or proceeding between the Parties relating to this Agreement, the prevailing Party will have the right to recover from the other(s) it's costs and reasonable fees and expenses of attorneys, accountants, and other professionals incurred in connection with the suit or proceeding, including costs, fees and expenses upon appeal, separately from and in addition to any other amount included in such judgment. This provision is intended to be severable from the other provisions of this Agreement, and shall survive and not be merged into any such judgment.

(n) No Agency. No Party has the right or authority to, and shall not, assume or create any obligation of any nature whatsoever on behalf of the other Parties or bind the other Parties in any respect whatsoever.

(o) Disputes. Any dispute, difference or question relating to or arising among any of the Parties concerning the construction, meaning, effect or implementation of this Agreement or the rights or obligations of any Party hereof will be submitted to, and settled by arbitration by a single arbitrator chosen by the corresponding Regional Office of the American Arbitration Association in accordance with the Commercial Rules of the American Arbitration Association. The Parties in dispute shall submit briefs of no more than ten (10) pages and the arbitration hearing shall be limited to two (2) days maximum. The arbitrator shall apply Texas law. Unless otherwise agreed by the Parties, with agreement by Iron Mountain not to be unreasonably withheld, arbitration will take place in Dallas, Texas, U.S.A. Any court having jurisdiction over the matter may enter judgment on the award of the arbitrator. Service of a petition to confirm the arbitration award may be made by regular mail or by commercial express mail, to the attorney for the Party or, if unrepresented, to the Party at the last known business address. If however, Depositor and/or Beneficiary refuse to submit to arbitration, the matter shall not be submitted to arbitration and Iron Mountain may submit the matter to any court of competent jurisdiction for an interpleader or similar action. Unless adjudged otherwise, any costs of arbitration incurred by Iron Mountain, including reasonable attorney's fees and costs, shall be divided equally and paid by Depositor and Beneficiary.

(p) Regulations. All Parties are responsible for and warrant, to the extent of their individual actions or omissions, compliance with all applicable laws, rules and regulations, including but not limited to: customs laws; import; export and re-export laws; and government regulations of any country from or to which the Deposit Material may be delivered in accordance with the provisions of this Agreement.

(q) No Third Party Rights. This Agreement is made solely for the benefits of the Parties to this Agreement and their respective permitted successors and assigns, and no other person or entity shall have or acquire any right by virtue of this Agreement unless otherwise agreed to by all the parties hereto.

(r) Entire Agreement. The Parties agree that this Agreement, which includes all the Exhibits attached hereto and all valid Work Requests submitted by the Parties, is the complete agreement between the Parties hereto concerning the subject matter of this Agreement and replaces any prior or contemporaneous oral or written communications between the Parties. There are no conditions, understandings, agreements, representations, or warranties, expressed or implied, which are not specified herein. Each of the parties herein represents and warrants that the execution, delivery, and performance of this Agreement has been duly authorized and signed by a person who meets statutory or other binding approval to sign on behalf of its business organization as named in this Agreement. This Agreement may only be modified by mutual written agreement of the Parties.

(s) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

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(t) Survival. Sections 6 (Term and Termination), 7 (General Indemnity), 8 (Warranties), 9 (Confidential Information), 10 (Limitation of Liability), 11 (Consequential Damages Waiver), and 12 (General) of this Agreement shall survive termination of this Agreement or any Exhibit attached hereto.

DEPOSITOR: TYLER TECHNOLOGIES, INC.

SIGNATURE:	
PRINT NAME:	Richard E. Peterson, Jr.
TITLE:	President - FMS Division
DATE:	September 25, 2008
EMAIL ADDRESS	

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

SIGNATURE:	
PRINT NAME:	Mary K. English
TITLE:	Director of Operations
DATE:	9/29/08
EMAIL ADDRESS:	ipmclientservices@ironmountain.com

Approved as to Operational Content:
Iron Mountain Operations

I. Nicole King, Contracts Specialist
Date: September 19, 2008

Approved as to Form and Content:
Iron Mountain Legal Department

James E. Raymond, Contracts Specialist
Date: Sept. 8, 2008

NOTE: AUTHORIZED PERSONS/NOTICES TABLE, BILLING CONTACT INFORMATION TABLE AND EXHIBITS FOLLOW

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DEPOSITOR AUTHORIZED PERSON(S)/NOTICES TABLE

Please provide the name(s) and contact information of the Authorized Person(s) under this Agreement. All notices will be sent electronically and/or through regular mail to the appropriate address set forth below.

PRINT NAME:	Stacey M. Gerard
TITLE:	Contracts Manager
EMAIL ADDRESS	stacey.gerard@tylertech.com
STREET ADDRESS	370 US Route 1
PROVINCE/CITY/STATE	Falmouth, ME
POSTAL/ZIP CODE	04105
PHONE NUMBER	800-772-2260
FAX NUMBER	207-781-2459

BILLING CONTACT INFORMATION TABLE

Please provide the name and contact information of the Billing Contact under this Agreement. All invoices will be sent electronically and/or through regular mail to the appropriate address set forth below.

PRINT NAME:	Lisa Carpenter
TITLE:	Senior A/P Specialist
EMAIL ADDRESS	lisa.carpenter@tylertech.com
STREET ADDRESS	370 US Route 1
PROVINCE/CITY/STATE	Falmouth, ME
POSTAL/ZIP CODE	04105
PHONE NUMBER	800-772-2260
FAX NUMBER	207-781-2459

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

All notices should be sent to ipmclientservices@ironmountain.com OR Iron Mountain Intellectual Property Management, Inc., Attn: Client Services, 2100 Norcross Parkway, Suite 150, Norcross, Georgia, 30071, USA.

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MUST BE COMPLETED — EXHIBIT A - Escrow Service Work Request - Deposit Account Number: 34953

SERVICE Check box(es) to order service	SERVICE DESCRIPTION-MASTER THREE PARTY ESCROW AGREEMENT - DEPOSITOR All services are listed below. Services in shaded tables are required for every new escrow account set up. Some services may not be available under the Agreement.	ONE-TIME FEES	ANNUAL FEES	PAYING PARTY Check to identify Paying Party
☒ Setup Fee	Iron Mountain will setup a new escrow deposit account using a standard escrow agreement. Custom contracts are subject to the Custom Contract Fee noted below. Iron Mountain will set up one deposit account to manage and administrate access to Deposit Material that will be secured in a controlled storage environment. Furthermore, Iron Mountain will provide account services that include unlimited deposits, electronic vaulting, access to Iron Mountain Connect™ Escrow Management Center for secure online account management, submission of electronic Work Requests, and communication of status. A Client Manager will be assigned to each deposit account and provide training upon request to facilitate secure Internet access to the account and ensure fulfillment of Work Requests. An oversize fee may apply. Iron Mountain will fulfill a Work Request to add a Beneficiary to any number of escrow deposit accounts under this Agreement and manage access rights associated with the account(s). Where possible, Beneficiary will have access to Iron Mountain Connect™ Escrow Management Center for secure online account management, submission of electronic Work Requests, and communication of status. A Client Manager will be assigned to each deposit account and provide training upon request to facilitate secure Internet access to the account and ensure fulfillment of Work Requests.	$1,912.50		☐ Depositor - OR - ☐ Beneficiary
☒ Deposit Account Fee including Escrow Management Center Access			$1,000	☐ Depositor - OR ☐ Beneficiary
☒ Beneficiary Fee including Escrow Management Center Access			$700	☐ Depositor - OR ☐ Beneficiary
☐ Add Additional Deposit Account	Iron Mountain will set up one additional deposit account to manage and administrate access to new Deposit Material that will be securely stored in controlled media vaults in accordance with the service description above and the Agreement that governs the Initial Deposit Account.		$1,000	☐ Depositor - OR - ☐ Beneficiary
☐ Add Additional Beneficiary	Iron Mountain will fulfill a Work Request to add a new Beneficiary to an escrow deposit account in accordance with the service description above and the Agreement.		$700	☐ Depositor - OR - ☐ Beneficiary
☐ Add Deposit Tracking Notification	At least semi-annually, Iron Mountain will send an update reminder to Depositor. Thereafter, Beneficiary will be notified of last deposit.	N/A	$375	☐ Depositor - OR - ☐ Beneficiary
☐ Add File List Report	Iron Mountain will fulfill a Work Request to provide a File List Test, which includes a deposit media readability analysis, a file listing, a file classification table, virus scan outputs, and assurance of completed deposit questionnaire. A final report will be sent to the Paying Party regarding the Deposit Material to ensure consistency between Depositor's representations (i.e., Exhibit B and Deposit Questionnaire) and stored Deposit Material. Deposit must be provided on CD, DVD-R, or deposited by sFTP.	$2,500	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Level 1 - Inventory and Analysis Test	Iron Mountain will perform an Inventory Test on the initial deposit, which includes Analyzing deposit media readability, virus scanning, developing file classification tables, identifying the presence/absence of build instructions, and identifying materials required to recreate the Depositor's software development environment. Output includes a report which will include build instructions, file classification tables and listings. In addition, the report will list required software development materials, including, without limitation, required source code languages and compilers, third-party software, libraries, operating systems, and hardware, as well as Iron Mountain's analysis of the deposit.	$5,000 or based on SOW if custom work required	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Level 2 – Deposit Compile Test	Iron Mountain will fulfill a Work Request to perform a Deposit Compile Test, which includes the outputs of the File Listing Report and the Level 1 - Inventory Test as described above plus recreating the Depositor's software development environment, compiling source files and modules, linking libraries and recreating executable code, pass/fail determination, creation of comprehensive build instructions with a final report sent to the Paying Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work ("SOW") prior to the start of fulfillment.	Based on SOW	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Level 3 - Binary Comparison	Iron Mountain will fulfill a Work Request to perform one Deposit Usability Test - Binary Comparison which includes a comparison of the files built from the Deposit Compile Test to the actual licensed technology on the Beneficiary's site to ensure a full match in file size, with a final report sent to the Requesting Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work ("SOW") prior to the start of fulfillment.	Based on SOW	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Level 4 - Full Usability	Iron Mountain will fulfill a Work Request to perform one Deposit Usability Test - Full Usability which includes a confirmation that the built applications work properly when installed, based on pre-determined test scripts provided by the Parties. A final report will be sent to the Paying Party regarding the Deposit Material. The Paying Party and Iron Mountain will agree on a custom Statement of Work ("SOW") prior to the start of fulfillment.	Based on SOW	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Dual/Remote Vaulting	Iron Mountain will fulfill a Work Request to store and manage the deposit materials in a remote location, designated by the client, outside of Iron Mountain's primary escrow vaulting location or to store and manage a redundant copy of the deposit materials in one (1) additional location. All Deposit Materials (original and copy) must be provided by the Depositor.	N/A	$500	☐ Depositor - OR - ☐ Beneficiary
☐ Release Deposit Material	Iron Mountain will process a Work Request to release Deposit Material by following the specific procedures defined in Exhibit C "Release of Deposit Materials" the Escrow Service Agreement.	$500	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Add Custom Services	Iron Mountain will provide its Escrow Expert consulting based on a custom SOW mutually agreed to by all Parties.	$175/hour	N/A	☐ Depositor - OR - ☐ Beneficiary
☐ Custom Contract Fee	Custom contracts are subject to the Custom Contract Fee, which covers the review and processing of custom or modified contracts.	$500	N/A	☐ Depositor - OR - ☐ Beneficiary

Note: Parties may submit Work Requests via written instruction or electronically through the online portal.
*15% Setup Fee discount applies to the first year only.

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EXHIBIT B

DEPOSIT MATERIAL DESCRIPTION

COMPANY NAME: _____ DEPOSIT ACCOUNT NUMBER: 34953

DEPOSIT NAME _____ AND DEPOSIT VERSION _____
(Deposit Name will appear in account history reports)
DEPOSIT MEDIA (PLEASE LABEL ALL MEDIA WITH THE DEPOSIT NAME PROVIDED ABOVE)

MEDIA TYPE	QUANTITY	MEDIA TYPE	QUANTITY
☐ CD-ROM / DVD		☐ 3.5" Floppy Disk	
☐ DLT Tape		☐ Documentation	
☐ DAT Tape		☐ Hard Drive / CPU	
		☐ Circuit Board	

	TOTAL SIZE OF TRANSMISSION (SPECIFY IN BYTES)	# OF FILES	# OF FOLDERS
☐ Internet File Transfer			
☐ Other (please describe below):			

DEPOSIT ENCRYPTION (Please check either "Yes" or "No" below and complete as appropriate)

Is the media or are any of the files encrypted? ☐ **Yes or** ☐ **No**

If yes, please include any passwords and decryption tools description below. Please also deposit all necessary encryption software with this deposit.

Encryption tool name_____ Version _____

Hardware required _____

Software required _____

Other required information _____

DEPOSIT CERTIFICATION (Please check the box below to Certify and Provide your Contact Information)

☐ I certify for Depositor that the above described Deposit Material has been transmitted electronically or sent via commercial express mail carrier to Iron Mountain at the address below.	☐ Iron Mountain has inspected and accepted the above described Deposit Material either electronically or physically. Iron Mountain will notify Depositor of any discrepancies.
NAME:	NAME:
DATE:	DATE:
EMAIL ADDRESS:	
TELEPHONE NUMBER:	
FAX NUMBER:	

Note: If Depositor is physically sending Deposit Material to Iron Mountain, please label all media and mail all Deposit Material with the appropriate Exhibit B via commercial express carrier to the following address:

Iron Mountain Intellectual Property Management, Inc.
Attn: Vault Administration
2100 Norcross Parkway, Suite 150
Norcross, GA 30071
Telephone: 800-875-5669
Facsimile: 770-239-9201

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EXHIBIT D

AUXILIARY DEPOSIT ACCOUNT TO ESCROW AGREEMENT

Deposit Account Number: 34953

Auxiliary Account Number_____

_____(**"Depositor"**), and Iron Mountain Intellectual Property Management, Inc. (**"Iron Mountain"**) have entered into the above referenced Escrow Agreement (**"Agreement"**). Pursuant to that Agreement Depositor may create additional deposit accounts (**"Auxiliary Deposit Account"**) for the purpose of holding additional Deposit Material in a separate account which Iron Mountain will maintain separately from other deposit accounts under this Agreement. The new account will be referenced by the following name: _____ (**"Deposit Account Name"**).

Pursuant to the Agreement, Depositor may submit material to be held in this Auxiliary Deposit Account by submitting a properly filled out Exhibit B with the Deposit Material to Iron Mountain. For avoidance of doubt, Beneficiary's rights and obligations relative to the Deposit Material held in any deposit account under this Agreement are governed by the express terms of the Agreement; this form does not provide any additional rights in the Deposit Material.

The undersigned hereby agrees that all terms and conditions of the above referenced Escrow Agreement will govern this Auxiliary Deposit Account. The termination or expiration of any other deposit account will not affect this account.

DEPOSITOR

SIGNATURE:	
PRINT NAME:	
TITLE:	
DATE:	
EMAIL ADDRESS	

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

SIGNATURE:	
PRINT NAME:	
TITLE:	
DATE:	
EMAIL ADDRESS:	ipmclientservices@ironmountain.com

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

All notices should be sent to ipmclientservices@ironmountain.com OR Iron Mountain Intellectual Property Management, Inc., Attn: Client Services, 2100 Norcross Parkway, Suite 150, Norcross, Georgia, 30071, USA.

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EXHIBIT E

ACCEPTANCE FORM

Depositor and Iron Mountain Intellectual Property Management, Inc. ("Iron Mountain"), hereby acknowledge that

BENEFICIARY COMPANY NAME: _____ is the **Beneficiary** referred to in the Escrow Agreement that supports **Deposit Account Number:** _____ with Iron Mountain as the escrow agent. **Beneficiary** hereby agrees to be bound by all provisions of such Agreement.

SERVICE Check box(es) to order service	SERVICE DESCRIPTION-MASTER THREE PARTY ESCROW AGREEMENT - DEPOSITOR All services are listed below. Services in shaded tables are required for every new escrow account set up. Some services may not be available under the Agreement.	ONE-TIME FEES	ANNUAL FEES	PAYING PARTY Check box to identify the Paying Party
☒ **Add Additional Beneficiary**	Iron Mountain will fulfill a Work Request to add a new Beneficiary to an escrow deposit account in accordance with the service description above and the Agreement		**$700**	☐ **Depositor - OR -** ☐ **Beneficiary**
☐ **Add Additional Deposit Account**	Iron Mountain will set up one additional deposit account to manage and administrate access to new Deposit Material that will be securely stored in controlled media vaults in accordance with the service description above and the Agreement that governs the Initial Deposit Account.		**$1,000**	☐ **Depositor - OR -** ☐ **Beneficiary**
☐ **File List Test**	Iron Mountain will fulfill a Work Request to perform a File List Test, which includes analyzing deposit media readability, file listing, creation of file classification table, virus scan, and assurance of completed deposit questionnaire. A final report will be sent to the Paying Party regarding the Deposit Material to ensure consistency between Depositor's representations (i.e., Exhibit B and Supplementary Questionnaire) and stored Deposit Material. Deposit must be provided on CD, DVD-R, or deposited by FTP.	**$2,500**	**N/A**	☐ **Depositor - OR -** ☐ **Beneficiary**
☐ **Add Level 1 - Inventory and Analysis Test**	Iron Mountain will perform an Inventory Test on the initial deposit, which includes Analyzing deposit media readability, virus scanning, developing file classification tables, identifying the presence/absence of build instructions, and identifying materials required to recreate the Depositor's software development environment. Output includes a report which will include build instructions, file classification tables and listings. In addition, the report will list required software development materials, including, without limitation, required source code languages and compilers, third-party software, libraries, operating systems, and hardware, as well as Iron Mountain's analysis of the deposit.	**$5,000 or based on SOW if custom work required**	**N/A**	☐ **Depositor - OR -** ☐ **Beneficiary**
☐ **Add Deposit Tracking Notification**	At least semi-annually, Iron Mountain will send an update reminder to Depositor. Thereafter, Beneficiary will be notified of last deposit.	**N/A**	**$375**	☐ **Depositor - OR -** ☐ **Beneficiary**

BENEFICIARY AUTHORIZED PERSON(S)/NOTICES TABLE

Please provide the name(s) and contact information of the Authorized Person(s) under this Agreement. All Notices will be sent electronically or through regular mail to the appropriate address set forth below. Please complete all information as applicable. Incomplete information may result in a delay of processing.

PRINT NAME:	
TITLE:	
EMAIL ADDRESS	
STREET ADDRESS	
PROVINCE/CITY/STATE	
POSTAL/ZIP CODE	
PHONE NUMBER	
FAX NUMBER	

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This proposal is valid until September 1, 2009.

PAYING PARTY COMPANY NAME: _____

BILLING CONTACT INFORMATION TABLE

Please provide the name and contact information of the Billing Contact under this Agreement. All Invoices will be sent to this individual at the address set forth below.

PRINT NAME:	
TITLE:	
EMAIL ADDRESS	
STREET ADDRESS	
PROVINCE/CITY/STATE	
POSTAL/ZIP CODE	
PHONE NUMBER	
FAX NUMBER	
PURCHASE ORDER #	

DEPOSITOR

SIGNATURE:	
PRINT NAME:	
TITLE:	
DATE:	
EMAIL ADDRESS	

BENEFICIARY

SIGNATURE:	
PRINT NAME:	
TITLE:	
DATE:	
EMAIL ADDRESS:	

IRON MOUNTAIN INTELLECTUAL PROPERTY MANAGEMENT, INC.

SIGNATURE:	
PRINT NAME:	
TITLE:	
DATE:	
EMAIL ADDRESS:	ipmclientservices@ironmountain.com

All notices **to Iron Mountain Intellectual Property Management, Inc.** should be sent to ipmclientservices@ironmountain.com OR Iron Mountain Intellectual Property Management, Inc., Attn: Client Services, 2100 Norcross Parkway, Suite 150, Norcross, Georgia, 30071, USA.

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This proposal is valid until September 1, 2009.

EXHIBIT Q
ESCROW DEPOSIT QUESTIONNAIRE

Introduction

From time to time, Beneficiaries may exercise their right to perform verification Services. This is a Service that Iron Mountain provides for the purpose of validating relevance, completeness, currency, accuracy and functionality of Deposit Materials.

Purpose of Questionnaire

In order for Iron Mountain to determine the Deposit Material requirements and to quote Fees associated with verification Services, a completed deposit questionnaire is requested. It is the responsibility of the Depositor to complete the questionnaire.

Instructions

Please complete the questionnaire in its entirety by answering every question with accurate data. Upon completion, please return the completed questionnaire to the Beneficiary asking for its completion, or e-mail it to Iron Mountain to the attention of verification@ironmountain.com

Escrow Deposit Questionnaire

General Description

1. What is the general function of the software to be placed into escrow?
2. On what media will the source code be delivered?
3. What is the size of the deposit in megabytes?

Requirements for the Execution of the Software Protected by the Deposit

1. What are the system hardware requirements to successfully execute the software? (memory, disk space, etc.)
2. How many machines are required to completely set up the software?
3. What are the software and system software requirements, to execute the software and verify correct operation?

Requirements for the Assembly of the Deposit

1. Describe the nature of the source code in the deposit. (Does the deposit include interpreted code, compiled source, or a mixture? How do the different parts of the deposit relate to each other?)
2. How many build processes are there?
3. How many unique build environments are required to assemble the material in the escrow deposit into the deliverables?
4. What hardware is required for each build environment to compile the software? (including memory, disk space, etc.)
5. What operating systems (including versions) are used during compilation? Is the software executed on any other operating systems/version?
6. How many separate deliverable components (executables, share libraries, etc.) are built?
7. What compilers/linkers/other tools (brand and version) are necessary to build the application?
8. What, if any, third-party libraries are used to build the software?
9. How long does a complete build of the software take? How much of that time requires some form of human interaction and how much is automated?
10. Do you have a formal build document describing the necessary steps for system configuration and compilation?
11. Do you have an internal QA process? If so, please give a brief description of the testing process.
12. Please list the appropriate technical person(s) Iron Mountain may contact regarding this set of escrow deposit materials.

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LAS CRUCES, NEW MEXICO ERP ASSESSMENT REPORT and RECOMMENDATIONS

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Table of Contents

History of the ERP Information Systems 4
Las Cruces Blueprint to Resolve ERP Problems 11
A. Organizational Recommendations 12
B. Process Recommendations 17
Technology Governance Plan 31

LAS CRUCES, NEW MEXICO ERP ASSESSMENT REPORT and RECOMMENDATIONS

Barry Strock Consulting Associates, Inc. (BSCA) has long recognized that local governments may find the biggest challenge in implementing ERP software is not the technology. Rather it is how to configure and implement ERP applications that embed and reflect best business practice and achieve promised efficiencies and added value. The results are too often underwhelming, and users are disappointed that the software has not delivered on its promises or expectations. This certainly has been the case in Las Cruces, as stated in the Request for Proposal for this ERP Assessment and Recommendations:

> *The conversion to Munis has not been fully successful due to problems associated with an inadequate implementation process and issues related to change management within the organization. Training was minimal, non-existent, or ineffective because of system issues or the discovery of gaps between system functionality and business process needs during the attempted training. These and other issues are inhibiting the ability to effectively utilize Munis and maximize the benefits of an ERP. In general there appears to be an unclear concept of the integrated nature and use of an ERP system, which is evident in that current business processes do not support effective use of the system. Many users continue to adhere to the old way of doing things by using "work-a-rounds"/"shadow systems" that they have created. In many cases the end users are self-taught and are not utilizing the full functionality of the system or know what is available to them. Many of the modules purchased have not been implemented; those that have are not being utilized fully and/or correctly. Due to a lack of documented business processes, workflow has only been minimally implemented. Reporting capabilities are constrained by poor data quality including lack of data entry standards, deficient data capture, redundancies and input errors.*

As a result Las Cruces does not have an implemented and fully usable integrated ERP software application and is not getting the benefits of integrated data, information flow, or workflow. Moreover there is significant distress and frustration in the operating units that are using the software, and most users think there are defects in the application rather than problems of business processes and the organizational culture. This has affected the City and its P & Q issues [P&Q are a set of metrics BSCA has defined as issues related to the Business Process

Reengineering and Change Management tasks], especially policies, processes, procedures, and performance, and its quality corollaries of work flow, services, accuracy of information, ability to share information across departments, and query analytics.

In what follows we assess the degree to which the problems are sourced in the quality of the Tyler Technologies' Munis™ ERP application software and the degree to which the problems are sourced in the implementation of the software, the organizational culture, and current business practices of the City.

History of the ERP Information Systems

Las Cruces developed its own homegrown software to manage the utilities for several decades and it procured Banner Software™ about 16 years ago to manage the financial and payroll suite of applications. The old software resided on mainframes and IBM AS/400 platforms. The City used Elke™ software for fleet maintenance. In October, 2005, the City procured Munis Software™ with the intention to use it for all financials, including HR and payroll, fleet maintenance, and all utility operations, customer service management, and billing and collections.

Because of sense of urgency to migrate from the old mainframe and legacy software the City and the software vendor, Munis, took many short-cuts in terms of conversion of data and file framework setups. The unfortunate result was that the Munis applications were neither systematically nor correctly configured to provide for internal consistency, to provide logical accounting frameworks, nor configured to operate effectively and efficiently to reflect best business practices. We suspect the vendor probably did what they were told, and there was little centralized project leadership to drive the City organization to use the occasion to fix existing problems and leverage the new application tools. In other words, the implementation was rushed, incomplete, fraught with setup errors, poorly managed and deployed, and staff were not adequately trained. Go-live was pressed on the staff when the product was not ready for live use.

BSCA and Las Cruces staff have identified at least three conspicuous and crucial areas that were incorrectly converted and these three areas are pivotal to the integrity of the ERP system:

1. **Chart of Accounts**: The file framework requirements to manage all of the City's and Utility's financial transactions is an accurate and correctly configured chart of accounts and accounting settings and coding.

2. **Street and parcel address verification:** For many reasons, the accuracy and consistency of identified addresses is not consistent among the utility customers, the code enforcement addresses, or any business license addresses. Addressing is one of the keystones to maintaining a citywide information system. In a city or a utility, the property address is the one unique identifier to manage the city or the utility data. How is it possible that the community development and utilities are using different addresses for the same residence?

3. **Utility-specific issues**: With such a complex series of utilities under the City's management, the Munis software settings and configurations must be tailored to the utilities and the utilities must consider a serious business reengineering and change management process to keep viable. For example, it takes almost twenty minutes to set up a new customer. With the technology available in Munis, this set up period should be either web enabled or completed in the office in fewer than ten minutes.

It is obvious that the City is not reaping the rewards of their approximately $2 million dollar investment allocated by the City Council to purchase and implement a new Enterprise Resource Planning [ERP] system. There have been several internal efforts to correct the problems and utilize the system more effectively, each stymied and stalled for different reasons including the departure of a project leader, lack of cooperation between departments, and assertions of false autonomy by operating units.

In our brief investigation, based on electronic surveys, review of innumerable documents, and on-site interviews and observations, we have identified critical

deficits that have stunted the ability of the City to conduct its business with better effect, efficiency, and cooperation.

- **Lack of proper controls and oversight:** It appears from its very inception and implementation that the Munis system has not been subject to rigorous controls and on-going oversight. From our view much of this is the result of organizational fragmentation, conflicts over authority, and the insistence on departmental authority that has permitted disaggregated data generation, a lack of departmental synergies, and a lack of accountability. From the project implementation to the current situation no one has truly been authorized to fix the ERP system.

- **There is no single, official accounting system of record.** Several modules are not fully implemented (such as HR and the full suite of applications), and others are only partly used, and much of the City's business is done on disparate spreadsheets that may or may not be usable by anyone but the author. As a result, the ERP system cannot provide the integrated and holistic information that is critical for efficient and effective management of money, personnel, and projects. Official reports are the result of data massaging, and stitching together information from a variety of un-auditable sources.

- **Security is not correctly deployed**: Security seems to be randomly set up and not consistent throughout the City. Record and field security is unevenly implemented. Employees are sometimes individual units of security policy, in some cases members of group policies, in other cases based on roles, and there are errors of policy that lock the wrong employees out of files to which they need access, while other employees have access to files and records to which they should definitely not have access. This makes usability problematic and users are likely to blame the product rather than the mistaken configuration.

- **Chart of Accounts and Finance Codes are not correctly configured**: The file framework set-ups in Munis differ than those in the Banner software. For example, in older software many of the accounting flags are embedded in the long account number sequence, whereas in more contemporary software, such flags are not embedded in the account number but are flagged on other data elements that are specifically established to track linkages and references of one data element to another. This is such a major disruption that no final financial reports or CAFR reports can be derived directly from the system. Instead the data needs to be exported or re-keyed into Microsoft Excel spreadsheets. This type of workaround is counter productive in trying to manage a holistic enterprise wide accounting system that is to be shared [directly or indirectly] with almost 1,600 employees.

- **Workflow is not designed into the system**: Workflow is the basis of process improvement and change management. Imbedded business rules and policies is the keystone to maintaining any process improvement options to streamline the business of the city or the utility.

- **Annual Closing of Financial Accounts**: Early computer systems had limited memory and data storage capabilities. As a result legacy systems needed to clean their chart of account transaction history by closing the books monthly and annually. This modality is a remnant of the late 1980s, but it is a ridiculous way to manage a $300 million complex municipal and utility operation using modern accounting software. Although the Munis software does not require monthly and annual closing of accounts, the implementation team grandfathered the old legacy outdated modality into the new system. Most awkward is that the Capital Improvement Projects should not close, but should be a seamless and continuous flow of up-to-the-minute transaction transparency and fiscal accountability.

- **No Project Management or Grant Tracking**
  Not installing these two functions is a major impediment to track projects and grants in the financial system.

- **Fleet Maintenance** is so convoluted that it is not being utilized in the solid waste operations and only after much remediation, the City garage is finally beginning to get some value out of the work order application.

- **Work Orders are not useful.** Utilizing work orders is a most arduous process and is not digitally connecting any work order activity to the general ledger accounts.

- **Utility Customer Service operations are challenging and there is considerable dissonance on the part of the users.** Establishing a new water, gas, or wastewater account is a flash back to the 1980s. It is astonishing how complicated and non-technology enabled the entire process is. The problem may in part be the Munis application. It is entangled by the demand, when the system was implemented in 2005, to grandfather the processes of the previous legacy systems.

- **Excessive and expensive Modifications:** A $2 million dollar investment in a contemporary system should not require endless modifications to force the proven technology to replicate old business practices.

- **Budget Process is dependent on Microsoft Excel.** A spreadsheet is NOT a database, and it should be used to provide additive data massaging. The budgeting in Las Cruces is almost totally based upon data "coming" from spreadsheets, which is totally contradiction to present-day best practices. Although the budget document is well done and has been awarded the GFOA Distinguished Budget Presentation Award, it is not generated digitally via interactive electronic remote sharing of data using the Munis ERP system, but rather endless spreadsheets and glue stick technology.

- **Building Permits:** There is no link between the permit number and the receipt number. The City is using Priors™ software to track code violations. The Munis suite should be able to handle issuance of permits and code violations.

- **Bar code reading in inventory:** The inadequacy of not being able to digitally read a bar code in the inventory division is 100% a city created problem. This simple technology has been complicated by inadequate and insufficient communication with Munis, the taking of shortcuts, and not taking the opportunity to be trained by the vendor.

- **Separate Inventory Files:** Both Fleet and Utilities are sharing the same inventory item file. The items are co-mingled. Each department has to search through the entire list to find their items. This problem is a set-up and training issue.

- **Munis upgrades sometimes corrupt data:** Due to the unnecessary proliferation of modifications required by the City, often these on-off mods are not part of the Munis standard software and thus, upgrades or enhancements may not be well-tested. The City should conform to the standard Munis suites and stop trying to re-invent the system to accommodate old and outdated means of maintaining a system.

- **PHMSA and PRC federal pipeline safety rules:** The City and Munis need to ensure that Munis is compliant with the PHMSA software and reporting requirements.

- **Gas Utility requirements:** In addition to the PHMSA and PRC requirements, there is a need for the Gas Utility personnel and Munis to create templates for tasks, inventory, work orders, and activities. The system currently cannot keep track of 10 days of work on a work order. This is probably a set up and training issue.

- **Non-linked modules**: It seems that the same data must be reentered several times to ensure that it correctly resides in multiple files within Munis, such as fixed assets and fleet equipment.

- **Position Control:** The field defined as "organization numbers" has been used for other data and the mis-use of the field is making position control and payroll unreliable. This is 100% a setup and training issue, not a software issue. As a result of this problem, there are many module linkages and changes that are not well understood, such as: HR changes in position control affect Fleet work order entry; and HR changes in position control are affecting transaction processing in permits and code enforcement.

- **Data Management:** Property and location master, fixed assets, utility customer data integrity is cumbersome to manage. There seems to be a lack of standardization of documentation [e.g., PDFs] to be attached to files [accounting, permitting, etc.]

- **Documentation and Support:** There seems to be very little system-specific internal training about using reference materials, network of expert users, and Knowledge Base documents. This is a strong asset of Munis, but obviously, many [probably most] of the end users have not had any or any adequate training. The resources are there, it is an easy problem to remediate.

- **Gas Metrics:** It is perceived that all of the Gas metrics are buried in the billing system.

It is fair to observe that there have been significant, if periodic, efforts on the part of City staff, especially IT to address these issues. There have been systematic but failed efforts to direct and manage the formal development of business policies, business process flows, and standard operating procedures (SOPs), to address data integrity issues, to consider implementation of modules paid for but not used, and to re-configure parts of the Munis application software. In an environment where these activities have been systematically stalled and truncated, there has even been

an effort to create technology governance. Each of these efforts have not borne the intended and desired results.

While we have not been impressed with the intensity of the support provided by Munis to Las Cruces over the years, we do not think that the City has been an effective manager of its ERP vendor either. We conclude that the problems with the ERP system have been more likely self-inflicted. IT has been charged with fixing the applications when it is not the business owner and has limited authority over the business owners. Business owners have not claimed their responsibility for the quality of their ERP software use, have not been cooperative in working with IT to identify policies, process flows, and SOPs, and have not worked as teammates to integrate the data and address data issues. BSCA has been asked to do this assessment and hopefully break the deadlock. We can identify the problems, we can recommend processes for redress of problems, but real change will only occur if the City is able to organize for change and holds staff members accountable for their part in making the ERP system work.

Las Cruces Blueprint to Resolve ERP Problems

With an annual budget approximating $293.8 million dollars, the City of Las Cruces must determine how to utilize its limited financial resources to best provide for the needs to manage the City using accurate, reliable, timely, consistent, and holistic enterprise-wide data.

We are convinced that the City can and must re-implement the Munis ERP system or migrate to another vendor's system. The problems with the City's chart of accounts, the addressing discrepancies throughout the system, and the irregularities in the system's security require a re-implementation or new implementation versus a patchwork attempt to repair the current system.

At this juncture, since re-implementation is a major effort, the City must first assess whether or not it wishes to continue with the Munis ERP application or migrate to another vendor's system.

The City needs to continue to address the current Munis system's (version 9.x) problems and deficiencies as re-implementation or a new implementation will take

at least 12-18 months. We do not think that the City should force a migration to Munis version 10.x. Although from our view the functionality of version 10.x is significantly enhanced, we believe a parts and pieces upgrade will only exacerbate the problems and not provide for systematic addressing of the City's and the Munis system's issues. The "migration" to Munis version 10.x, or by Fall the newly released version 11.x, ought to be treated as a new installation. This will include:

- the proper organizational investments in project leadership and structure;
- the addressing of business processes, information and workflow, and SOPs;
- the redesign of the chart of accounts and the crosswalk from the old to the new;
- full data integration and implementation of all modules (in appropriate sequence);
- careful and systematic data conversion that simultaneously addresses addressing;
- systematic project implementation, including design, testing and appropriate and complete training;
- on-going authority and organization to monitor and continuously improve the system as a business tool.

The following recommendations do not re-invent the wheel. They are not novel. They represent proven, systematic organizational and project process methodologies. If implemented thoroughly, with Executive commitment, and operational authority, it will result in a successful project that advances the City toward its goals of effective and efficient conduct of its business.

A. Organizational Recommendations

1. Establish an Executive Steering Committee

The Project, and its governance, must be led by an Executive of the City. One of the Assistant City Managers should take this critical responsibility of being the ***Executive Sponsor***. This person provides support to the project by allocating human and financial resources, providing strategic direction, and communicating to the organization about the importance of the project. This person is the project champion.

The Executive Sponsor heads up the **Executive Committee**. This Committee is typically made up of key department directors. Its task is to support the organization and cultural change, through a change management strategy, necessary for the project's success and to ensure that each department is on board. The Executive Committee oversees the project team and the project as a whole and is updated on all project progress, project decisions, and achievement of project milestones.

It must be noted that there was an effort to identify business process flows and SOPs that used this standard project model. It appears to have failed for a variety of reasons: Key personnel left, the project lost momentum, there was a lack of cooperation with IT, and departments and staff members were not held accountable. These are management challenges and these failures must not be tolerated and rationalized as they have in the past.

2. **Appoint Three F-T Permanent Business Analysts**
The chart of accounts, the parcel and address identification, and utility operations are the keys to any success going forward with reinstalling or repurchase of new ERP and Utility systems. It is our recommendation that the City have three Business Analysts specifically reporting to Victoria in Finance, Brian in Operations (specifically working with Tim in GIS), and Jorge in Utilities (in addition to the current Business Analyst who oversees the current application). Each should have a full time dedicated Business Analyst assigned to assist them through the analysis, evaluation, change management, business reengineering, and deployment of new or upgraded ERP system. The Business Analysts will serve on the Project Operations Team throughout the project.

The job description currently in use for this position is suitable for this project:

Business Analyst Description

- Works with multiple stakeholders and customers using industry and vendor best practices to develop an in-depth understanding of core processes; build and develop a repository of business process maps; identify, document and size the areas of

opportunity for improving efficiency, customer service and effectiveness; conduct root cause analysis to identify and assess impact of causative factors that might lead to errors or inefficiencies in business processes or outcomes; lead prioritization of proposed solutions; participate in implementation; and track and monitor success and impact.

- Defines an organized approach to performing business analysis tasks, including the development of standard methodologies, documentation standards, process mapping and the reinforcement of skills required for the role.
- Performs in the role of project manager using standard project management techniques tailored to the target audience.
- Serves as business process resource on all matters involving the support, maintenance, enhancement, and upgrade of the City's integrated enterprise systems.
- Coordinates, participates, and may lead others in the design and evaluation of business processes required for the implementation of enterprise systems and upgrades; analyzes new components to determine if previously modified processes can be eliminated and/or if a new release will also require modification; participates in system testing to ensure that the new release provides the expected results throughout the business cycle.
- Performs requirement and workflow analysis, and develops design specifications for new or modified workflow and business processes; evaluates existing city business process models to identify potential areas for automation and streamlining; designs and implements enhanced automated processes.
- Works directly with vendors to resolve underlying system program or data problems; searches vendor web sites for posted resolutions and fixes in resolving identified problems.

3. Appoint a Project Operations Team – "Leading from the Middle"

A Project Operations Team must be authorized to act on behalf of the Executive Steering Committee and the City to drive the project to a successful conclusion. The critical members of this team will be:

- Program Manager
- Enterprise Services Manager
- Business Analysts (4)
- Management Analysts (3)
- Auditor Representative

The Project Operations Team is responsible for and empowered to implement the new system in the best interests of the City consistent with

the project goals, project vision, and direction from the Program Manager and Executive Committee. Program Operations Team members will devote their efforts to the project full-time.

The Project Operations Team should be housed, at least for the duration of the project, in the same vicinity with access to a conference room. While this is not an IT project, it is an information systems project, and it may be useful to house the project in a neutral, enterprise service area, such as IT.

The Project Operations Team will identify and organize the key business owners in each department, specifically subject matter/functional experts, who will take ownership for their business processes and functional outcomes. They will constitute the ***Program Implementation Team***.

Program Implementation Team members are the core ***Functional Leads*** for each area in the system and each is responsible for working with the divisional Business Analyst and the Project Operations Team to develop appropriate business process and system configurations in their respective areas.

In the first and critical instance, ownership of all of the financial elements of the ERP system, and its design and best practice implementation, is the responsibility of the ***Finance Director***. The Finance Department is charged with defining and setting up the new chart of accounts and all codes and classifications citywide, and managing and monitoring the accounting settings and classifications across the system to ensure that all transactions are finally accounted for in the general ledger and that the City has an official "system of one." Other units, such as Utility Billing and Collections, are responsible for their domain and the re-engineered business processes that bring streamlining, better service, cost containment and accountability to their operations.

The Project Operations Team will be responsible for overall integration of modules that foster department synergies resulting in best business practices.

4. Hire a Program Manager for the Review and Implementation Period

ERP Program Manager Description

The ERP Program Manager is a trusted and capable person able to organize, plan, and direct project team members, functional team leads, and subject matter experts toward a successful design and implementation of the ERP system. This person reports to the Executive Sponsor and the Executive Committee, and must be invested with the authority that this role requires to organize and direct City staff who participate in the project.

The Program Manager must be able to:

- Organize City units to collect the necessary data, and conduct the necessary meetings, that result in an effective design for business process engineering among, between, and within departments of the City;
- Lead change management activities and the adoption of new business processes through the execution of a change management plan;
- Manage the ERP project, leading and directing City staff and the vendor toward an effective implementation of the ERP system;
- Direct City-wide communications and communicate effectively to the vendor toward successful implementation;
- Provide the majority of the City's change management communications and coaching;
- Supervise the overall implementation schedule;
- Manage development of training and providing training oversight, ensuring that City end users are receiving appropriate training;
- Coordinate department readiness for new system;
- Assure appropriate post-implementation support.

The program manager will be responsible for:

- Acting as liaison between Project Operations Team and Executive Team, including regular reporting of project status and timelines, accomplishments, status of milestone deliverables, progress toward goals and City defined success, issues and risks, and risk mitigation strategies;
- Working with the vendor Project Manager;
- Acting as point of contact for vendor for staffing and delivery matters;
- Reviewing and approving all project deliverables;
- Executing the Change Management Plan;
- Executing the Communications Plan;

- Communicating to the Project Operations Team on project status and timelines, issues and risks, especially those that involve issues across departments, and risk mitigation strategies;
- Management of project risks and issues;
- Managing and updating the project plan;
- Maintaining team contact numbers, email lists, and regular communications;
- Escalating issues per the approved Issue Resolution Plan (see below in B.1. for a description);
- Implementing the Change Management Plan.

B. Process Recommendations

1. Continue with Weekly Phone Consults with Munis Team

The city should instruct the key Business and Management Analysts, and Auditors who were working with Munis on the first phone call to continue each week with a weekly phone call to work through items of dysfunctional in the current Munis software deployment. Appropriate people at Munis, and the team at the city who were on the initial conference call, and any other persons by module who have an investment in their business processes, should be on the subsequent conference calls. There should be an issuance of agendas and minutes to keep everyone (including the original Munis representatives) in the loop, on target and in focus].

For this purpose, and as part of regular project activity, the City should follow a relatively formal **Issue Resolution Plan**. The process follows several steps:

1. Issues are identified so that it can be properly contextualized (what department, what module, what function) in order to be resolved. The desired state or outcome must also be identified. Typically the Program Manager will keep a running log of issues. They can be organized under several categories, but they must indicate priorities, timetables for resolution, and the owner of the issue. The Project Operations Committee should be consulted, and any appropriate subject matter experts (SMEs) to get a broader perspective.

2. Working through the options for solutions requires a team approach that will include the vendor. It is critical that the team

agree on the desired approach and agree on timetable and costs, as well as who is responsible for effecting the solution.

3. Implementation is an absolute critical stage requiring planning and careful and deliberate and resolute program management. This means driving to a full solution within the planned timetable.

4. Results need to be tested. Usually this is iterative until the solution is approved. Often differ items are linked to others, so this also requires careful deliberation and planning.

5. The running log needs to be addressed iteratively. That is, it needs to be reviewed regularly, and adjusted for progress on existing issues, notations for completed issues, and the addition of any new issues.

In the case of Munis, it is important to do as much repair to the current system as possible, as the City is likely to continue its use for at least 12-18 months regardless of whether or not it re-implements Munis or migrates to another system. Moreover, users will discover that many of the problems with the ERP application are "self-inflicted" by initial errors in configuration or lack of training and mis-use. As these items become more apparent problems will be fixed and there should be some additional training to the correct use of the ERP system.

Additional analysts or subject matter experts should be invited into the weekly phone call as their issues are presented. The key to this process is that the city should create an agenda of the specific items that are to be discussed and minutes to be shared with all parties after the phone call. The Agenda/Minutes model will keep the parties focused on targeted issues and targeted follow-up items or tasks.

For this phase of discovery the City should expect to review and seek to resolve:

i. A composite list of action items that are outstanding issues with the system;

ii. Calls for service to Tyler-Munis Customer service and the activities associated with each of the calls;
iii. Work Orders or modification outstanding requests;
iv. Titles and descriptions of spreadsheets used as a substitute for that which users would expect to be provided by the ERP system.

These weekly phone meetings are likely to continue for up to eight weeks. The City and Munis should consider a face-to-face meeting about the most troublesome issues. *This will validate if it is prudent to schedule a multi-day on-site scripted demonstrations by Munis as a precursor to renegotiating a re-deployment full fit/gap analysis, statement of work, and a new set of contracts.*

Although BSCA is not currently under contract to go beyond the Report Card that will provide a more detailed blueprint for action, but we would be able to provide such a contract, if and when, it is appropriate. BSCA is prepared to create an RFI that will be the precursor to any on-site demonstrations of version 10.X and provide follow-up services as specified in the blueprint.

2. **Conduct on-site scripted demonstrations of the Munis ERP system to address issues and build confidence in a decision to move forward in the process with Munis or to decide to abandon Munis.**
The City should invite Tyler to demonstrate the latest version (10.x) of the Munis application to see whether or not it can provide enhanced capabilities, functionality, and more streamlined processes. The demonstration should not be a vendor "canned" event but a detailed and scripted demonstration of those processes and results that are of particular concern to the City as well as the specific qualities of the software application.

For example, if the City was to have Human Resources demonstrated the script might have these specific components:

- Demonstrate the structure your system uses to group employees for purposes of policy and pay compliance and administration – i.e. FLSA rules, benefit eligibility, etc.
- Setup of structure – how are employees grouped for application of common work

rules. We currently have units and groups within the units. An example of units and groups is non civil service exempt and non-civil service non-exempt. Units provide additional breakdown – in the case of non-civil service into full time, part time less than 20, part time 20 and more.

- Set up new Department / Division / Unit (provide ability to have 3 roll up levels for reporting)
- Set up new jobs and/or positions (copy features for similar positions)
- Create/modify job description (may be in recruitment module)
- Premium Pays
- Sundry deductions (other than plan deductions such as benefits)
- Ability to indicate "safety sensitive, MVR, DOT" on position for reporting
- Position Control – tie to recruitment and budget
- Personnel Actions:
- New Hire – what populates from job and what has to be manually entered?
- Update of assignment pay / premium
- Are all enrolled employees updated and does the workflow generate auditing information.
- Change assignment / Add Assignment Pay / Premiums (Start & End)
- Salary Increase
- Individual
- Pay for performance – if not in system, ability to load info via spreadsheet
- Sundry Deductions (Other than benefit plans i.e.: United Way / Earth Share)
- Changes between employment status with different policies, eligibilities, etc. Non-Civil Service to Civil Service and Civil Service to Non-Civil Service; Work Rule – currently setup on the job/position for time generation.
- Change in employment status / eligibility:
- Part-time to Full time
- Non-Exempt to Exempt and vice versa
- Lateral Transfers - what populates from job and what has to be manually entered?
- Promotion and/or Reclassification
- Separation:
- Termination
- Retirement
- Retirement w/ 20 years
- Discharge
- Re-Hire
- Change Term. Date (correction)
- Change Hire Date (correction)
- Reports: employee salaries, add pays, turnover, transfers, vacancies

3. **Develop RFI and release to Tyler Technologies for affirmation of Munis capabilities, functionality, plan to address gaps, and cost of re-implementation**

   In order to determine the fit-gap of the upgraded Munis ERP, the City should develop an RFI that specifies the promised functionality, any

modifications, and the cost of upgrading and re-implementing the ERP system.

Such an RFI would identify whether or not Munis has the capabilities and functionality, and if not whether Tyler would be willing to modify the application for free or not, and any fixed cost for the modification. In addition there would be a complete investment summary of costs. The RFI would look like the following:

HR.8.	[illegible]		
8 1 1	(A performance test is a test required in addition to the written exam, demonstrating proficiency in a particular area. Performance tests may include such things as typing, physical agility, psychological, etc.)	Answer Required Type Y, N, M, or MS	
8 1 2	Delivers a configurable performance management process (i.e., goal setting, feedback gathering, review, performance summary)?	Y	
8 1.3	Solicits performance feedback from multiple reviewers (i.e., subordinates, directors, other managers, peers)?Exchange data between multiple users simultaneously?	MS	
8 1.4	Saves work in process, draft review, and return to complete?	Y	
8 1.5	Tracks performance review status and dates (i.e., complete, incomplete)?	Y	
8 1.6	Maintains performance feedback and ratings history?	Y	
8 1 7	Enables reporting and analysis of performance ratings for various employee groups (i.e., by job, manager, geography)?	Y	
8 1.8	Integrates with training and succession management applications and processes (e.g. learning plans/career planning)?	N	
8.1.9	Provides e-mail reminders and overdue notices throughout the process?	N	
8.1.10	Administrators can view the status of the review process at any time?	Y	
8 1 11	Administrators can assign different review forms for different employees within the same review cycle?	Y	
8 1.12	Delivered with standard competencies and objectives?	N	
8.1.13	Employees can complete self-evaluations?	MS	
8.1.14	Historical reviews can be accessed easily by managers or administrators?	MS	
8 1 15	Review results are automatically updated in the HRIS system for processing pay increases and reporting?	Y	
8 1 16	Appraisal steps can be easily defined by administrators? Different employee groups can have different appraisal steps?	Y	
8 1 17	a. Maintains a table of user-defined performance tests?	Y	
8 1.18	b. Enable the tracking of any number of performance tests associated with an exam?	Y	
8 1 19	c. System stores performance test results for each applicant for each exam?	Y	
8 1 20	d. Enable automatic waiving of previously passed performance tests based on a user-defined period of time?	N	
8 1 21	e. Prepare an attendance list for all eligible for each performance test?	Y	
8 1 22	f. Reports include the ability to show performance test results for each exam, over any specified period of time?	Y	
8 1.23	g. Reports include the ability to show performance test results for each applicant, over any specified period of time?	Y	

The RFI, in combination with any current issues list, would be used as the baseline for the Statement of Work and the contract in order to hold Tyler to its promises. Payments would also be indexed to services and acceptance testing.

4. Evaluate Munis RFI Response and Decision to retain Munis or full replacement procurement (RFP release)

a. **Decision to retain Munis:** The City would continue in project implementation mode under the authority of the Executive Committee and operationally through the Project Operations Team and the Project Implementation Team.

   i. The Project Operations Team would develop the Statement of Work and any supplemental agreements;
   ii. The Project Operations Team will address remaining deficiencies and resolutions in version 9.x and complete the fixes to enhance City operations;
   iii. Planning would commence for re-implementation and migration to V10 or V11. This will include the Project Implementation Team and it will seek to:
      1. broaden module usage, pay specific attention to information flow and data integration, and work flow processes;
      2. Correct addressing, security, and implement a new Chart of Accounts;
      3. Critical work on data conversion;
      4. Risk mitigation to prevent disruption.
   iv. The Executive Steering Committee will authorize the implementation of a change management strategy, led by a Change Management Team;
   v. The City will implement the latest version of Munis ERP (v.10 or 11) in test mode;
   vi. Munis will train users directly on the applications;
   vii. The City will go-live on the re-implemented Munis ERP;
   viii. The City will allocate resources for On-going management of ERP system, including training and continuous business process improvements

OR

b. **Full Replacement Procurement:** The City would move into procurement mode. Under the authority of the Executive Committee and

operationally through the Project Operations Team and the Project Implementation Team the City would:

i. Release the RFP to the marketplace of ERP vendors;
ii. Conduct a pre-RFP conference;
iii. Evaluate proposals;
iv. Conduct reference checks
v. Conduct City on-site demonstrations with participation of appropriate City-wide staff
vi. Visit selected Cities with comparable demands
vii. Visit corporate headquarters
viii. Development of a Statement of Work and contract negotiations
ix. Project Implementation
x. Implement change management strategy
xi. Implement applications in test mode
xii. Training on applications
xiii. Go-live on applications
xiv. On-going management of ERP system

5. **Change Management -- It is imperative that the City embark upon discussing and planning to actuate the P & Q issues** associated with process improvement, business process re-engineering and how to make effective change happen prior to its decision to retain or reject Munis. Change management will continue throughout the engagement, regardless of the migration decision.

Definitions of P & Q Issues:

- **P**eople: Evaluate People roles vis-a-vis newer technology innovations. The goal would be to enhance work tasks being provided by current staff to be possibly more fulfilling and more proactive.
- **P**olicies: Often the policies applicable for older paper driven systems need to be modified to accommodate the newer digital innovations such as electronic signatures and more end-user entering and processing of data.
- **P**rocesses and **P**rocedures: Often there are many manual physical processes and procedures which need to be modified to eliminate much of the redundant physical paper requirements
- **P**aperwork: Newer systems often deploy the workload to end-users at the desktop digital level, thus typically significantly eliminating much of the redundant physical paperwork trails.
- **P**aperwork Clarity: In many municipalities utility notices, door hangers, and delinquent notices are not provided in bi-lingual formats,
- **P**rogression from old to new: Business Change Management often requires a significant migration from old methodologies to new ones. **P**roductivity: Routinely, individual and citywide productivity is the first benefit of newer technologies and maximize the productivity transition process.
- **P**rocooperation- Coefficient™: Measuring the procooperation efforts of the staff to engage in the avalanche of data conversions, training, and business statement of work defined reengineering tasks.
- **P**erformance: Define metrics to pre-measure productivity before the new innovations and to re-measure the staff performance with the same metrics after the new technologies are fully deployed.
- **Q**uality of Workflow: There are two types of workflow: people workflow in which information flows from one designated person to another (for example, purchasing permissions through electronic signatures on requisitions and purchase orders), as well as the business process work flows that articulate policy and procedures (for example, purchasing rules are embedded into the system such that different purchasing thresholds have different pathways in the electronic purchasing process).
- **Q**uality of Services: Quality of services metrics need to be both defined and deployed to install quality of services measures.

- Quantity of Accurate Information: Quantifying the consensus of staff to determine consistent accurate and timely information as a before and after observation.
- Quality of shared information among departments: One of the major impediments to change seems to be redefining citywide ownership of information, as opposed to the normal silo approach.
- Query Analytics: One of the immediate changes we encounter when transitioning from paper and older technologies is a drastic availability of better query tools and analytical tools. Sometimes we encourage vendors and clients to intentionally invest in sufficient training time to maximize the often more advanced query and analytical tools.

The City must tailor its business and the use of the Munis ERP applications to a changed landscape. In 1990 there were only 62,126 residents in the City, whereas in 2013 there are 101,000 -- a 60% increase in residents. Over the past decades the complexities of utilities and cities has been compounded many, many fold, and the technology that was needed over two decades ago would not meet the needs and legal requires of today. Web enabled access to information in "the cloud" permits citizens to have 24 hour access to utility information, city information, and an ability to pay or register for dozens of services where were not remotely available to citizens, taxpayers, or utility customers. In other words, it will not be enough to address the issues of a 2005 implementation. The City needs to design the business processes and the application functionality to address the demands of the City's external and internal customers, its taxpayers and citizens, for 2014 and beyond. We do not anticipate that this will be easy which is why we have emphasized the need for authority and accountability. Unfortunately cleaning up a bad project deployment is far more costly and time consuming than doing it right the first time. Trying to undo file setups that were not sufficiently well thought out, or changing business processes that were configured without adequate consideration is more difficult than preventing problems up front.

The City needs to measure Quality of Performance using these metrics:

- **Cost Containment** – increase efficiencies and contain or reduce cost;
- **Streamline Operations** -- increase the productivity of existing personnel and provide policy makers with essential management information;
- **Enhanced Service** – provide employees with the tools to effectively represent and deliver the tasks of government;
- **Accountability** – provide clear cost and service justifications for services provided to citizens and taxpayers.

The City needs to focus, as it rethinks its business processes and designs the configuration of the ERP application, about these "P" issues:

- People [staffing and role changes due to technology innovations]
- Policies [needing to be re-evaluated for 21st century expectations]
- Processes [needing to be streamlined to increase quality of customer service]
- Procedures [needing to be re-thought to reduce workloads and work-efforts]
- Paperwork reduction to simplify and expedite data capture, storage, retrieval
- Paperwork evaluation for the linguistic clarity
- Progression-review from paper to electronic/optical data capture and storage
- Productivity [evaluate how to increase staff productivity]
- Performance [evaluate performance in the UB division]

This also includes the "Q" issues attendant to employee and customer satisfaction:

- Quality of work
- Quality control
- Quality of customer service
- Quantity of work units per person
- Query of analytical data

Change management is a process not an outcome. If not specifically and rigorously addressed, projects like these tend to replicate existing designs and work processes rather than take the opportunity to re-engineer processes for greater efficiency, effectiveness and accountability. In these engagements, it is the human resistance and failure to embrace change, not the technical

implementation, which poses the greatest risks for falling short of the goals of this effort. Engaged change management will mobilize and positively motivate your staff to consider better ways to get the work done and hold them accountable for the system and workflow design.

- In the initial phase of the project, it is imperative that stakeholders at all levels, and in all units, must understand the project and its purpose. Employees should have clear expectations about anticipated results of their individual and collective efforts. An initial task is to develop a Project Charter and a Change Management Plan. A Project Charter lays out the history of the project, the strategic goals and objectives of the project, and roles and responsibilities of the participants. A Change Management Plan describes the expectations for the organization and the organizational culture in adopting and adapting to the application software and the attendant new business processes. The Change Management Plan can be described as follows:

    - Executives, managers and staff work toward clear and explicit expectations for their roles in pre- and post-go-live participation. They must all understand the decision process, which includes assigned authority and the chain of command. Timelines, Deadlines and Milestones should be clear, as well as requirements for training.

    - The Executive Sponsor, the Executive Steering Committee, and the Project Operations Team should understand the primary areas of strain, including culture, people, politics and policy. They must have a clear and transparent understanding of risks to project success. The Change Management Plan seeks to answer the question: what factors will assure successful implementation and satisfaction of the end users? This will likely have an impact on policies and business processes, and require changes in information flow and work flow as part of Business Process Re-engineering.

    - Design and configuration: re-engineering of the data, screens, processes, reports. This project will be exhausting and require focus and energy.

- This and subsequent phases must also have:
  - On-going communication
  - Regular and systematic risk assessments
  - Pilot and feedback: is this what we thought it would look like? Do we have time to correct it? Are we headed in the right direction?
  - Implementation phase: are we ready? Does it work?

Finally, after the project is complete, the City will need to consider post- go live adjustments. Did users get sufficient training? Does the system function as designed and anticipated? Can it be corrected, and at what cost?

In all cases communication must be carefully targeted and crafted to different stakeholder audiences. All communications about the project must be consistent, credible, and manage expectations. Messages must be genuinely informative. Leaders and consultants should act in a consultative manner (listen) and respond quickly and thoroughly (feedback and action). Strategies and activities must generate user participation and involvement. Presentations and activities should focus on clarifying information about the positive and realistic impact of the project on departments and individuals and reducing resistance to change.

In order to minimize risk and increase the likelihood of project success, project and change management depends on regular and systematic reviews of Organizational Risk. Specifically, the change management strategy should include:

- Looking at how clearly, and how strongly, the vision and value of the project is shared by stakeholders;
- Reviewing the readiness of the stakeholders to embrace task changes and new job roles;
- Understanding and using communications strategies and activities to support the project;
- Assessing how prepared the staff is to be trained in the new application and work flow.

At Las Cruces major changes are likely to include less dependence on IT for query and reporting tasks and more responsibility on the end-user. Employees will be required to learn new skills, enter additional data, follow new codes and

new work flow procedures, and often to make immediate decisions that have an immediate impact on financial and system data. Staff may be required to embrace expanded value-added job tasks and perhaps redeployment of efforts or assignment. Staff will be expected to abandon other forms of data recordkeeping such as their own spreadsheets and databases to insure that the new system is comprehensive and is functioning as a true integrated system. Some of the new functionality is likely to cause concerns about authority, control over information, process flow, and issues of accuracy.

Failure to manage the change curve will, in our experience, result in project delays, problems with workforce morale and performance, non-compliance with new policies, flawed work flow processes and procedures, untrained staff, varied acceptance levels, reduced credibility of the project leaders, negative political implications, and remedial work and supplemental budgeting post-implementation.

Las Cruces has been here before. Is it time to "bite the bullet," cooperate at the highest levels of the organization, wield executive authority and hold employees accountable, demanding the necessary synergies between departments, and finally making the needed changes in the organizational culture? If so, implement the plan.

6. **Form a Technology Governance Committee:** In the context of our report it is our observation that much has been expected of the IT Department that is more properly the domain of the business units. As a result, IT is unnecessarily blamed for the dysfunctionality of the Munis ERP system.

   More importantly, IT has attempted in the past to create a governance structure and process and it has not met with eager participation. This is a critical organizational need if the City is to develop synergies between departments, identify priorities, have clear decisions based on those priorities, and contain duplication and cost. It is especially crucial in those areas that are of enterprise-wide concern and involve the provision of services by many departments using the same application software and tools.

In what follows we present a technology governance model that can be modified as appropriate to the City of Las Cruces:

City of Las Cruces®
PEOPLE HELPING PEOPLE

COUNCIL ACTION AND EXECUTIVE SUMMARY PACKET ROUTING SLIP

For Meeting of _____ (Ordinance First Reading Date)

For Meeting of October 5, 2015 (Adoption Date)

TITLE: A RESOLUTION APPROVING A LICENSE AND SERVICE AGREEMENT WITH TYLER TECHNOLOGIES INC. MUNIS DIVISION, FOR THE REIMPLEMENTATION OF THE CITY'S ENTERPRISE RESOURCE PROGRAM (ERP) SYSTEM IN THE AMOUNT OF $1,612,010.00.

Purchasing Manager's Request to Contract (PMRC) {Required?} Yes ☒ No ☐

DEPARTMENT	SIGNATURE	PHONE NO.	DATE
Drafter/Staff Contact		x-3228	9/25
Department Director			
Other			
Assistant City Manager /CAO Management & Budget Manager		x2078 x2106	10/1/15 9/30/15
Assistant City Manager/COO			10/1/15
City Attorney		EXT 2128	1 OCT 2015
City Clerk - Interim		x2115	10/1/15

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