BCC Technology Steering Committee (BCC TSC)

Business Case

for

Enterprise Asset Management

Prepared by:
EAM Project Team

Departments:
PCR, REM, SW, PW, Util, and BTS

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1.0 BCC TSC Business Case Overview

To effectively manage technology expenditures, the BCC Technology Steering Committee (BCC TSC) needs to be able to evaluate requests in a consistent and logical manner. The objective is for the BCC TSC to commit to efforts that bring the most value to the citizens and employees of the county at the lowest reasonable risk. To help achieve this evaluation, the Office of Management and Budget (OMB), with input from Business Technology Solutions (BTS), has established a standard format for use by agencies in developing a business case.

Business cases should be submitted for any project that exceeds 200 ROM hours or $10,000. Projects below this threshold do not need to complete a business case. Those projects will be addressed by BTS directly and prioritized as resources are available.

The completion of the Business Case is the responsibility of the requesting department. Each department will fill out the items in the Business Case designated as “Business” items. Technical components of the Business Case will be filled out by BTS staff, and any assistance with Quantitative Benefits (section 5.5) will be provided by OMB.

The Business Case has been color coded to help make it more user-friendly. The Business items are highlighted yellow, the BTS items are highlighted blue, and if items relate to both the Business and BTS they are highlighted green.

The scores on the business case are used to populate a Decision Square which scores the request in terms of Value and Risk. Value should be maximized so the maximum number of points is 100. Risk should be minimized so the best possible score is zero. Projects that are scored as high value and low risk will have a good chance of being approved. Conversely, projects that are scored as low value and high risk will not have a good chance of being approved.

Detailed instructions for completing the Business Case are contained in a separate document named BCCTSC Business Case Instructions & Terminology.

2.0 Request Identification *(Business to complete)*

Request Name/Title:	Enterprise Asset Management Project Implementation		
Date Request Submitted:	20-May-13		
BTS Service Desk Ticket Number:	R384330		
	Name:	Phone #	E-mail Address
Request Submitted By:			
Owner or Dept. Sponsor:	EAM Executive Committee		
Main Stakeholders and Contributors:	EAM Phase 2 Statement Of Work Development Team, EAM Project Management Team		
Request Partners (Depts. or Agencies)	Parks & Conservation Resources, Real Estate Management, Utilities, Solid Waste, Public Works, Business Technology Services		
Summarized Request Description (use the BTS Service Desk ticket description)			
Implement Enterprise Asset Management. Implement updated enterprise business processes that reflect industry best practices, expand system mobility, integrate with GIS/Oracle/SAP, increase customer satisfaction, maximize and improve service delivery level of core services, and initiate an Enterprise Asset Management Program/Plan.			

3.0 Request Background *(Business to complete)*

Briefly describe the following:

Q1. What is the business problem or opportunity this request addresses?
A1. The County seeks to provide an Enterprise level solution to Asset Management through a single solution to optimize asset longevity, minimize life-cycle costs, forecast and prioritize capital expenditures, control risk to acceptable levels, deliver sustainable levels of service, focus limited resources through root cause and spatial analysis, provide performance indicators to drive fact-based business decisions, expand field mobility, share resources across department boundaries, and retire legacy systems.
Q2. How is the problem currently being addressed?
A2. The departments impacted are currently using multiple independent disparate applications and databases. Hardware to support some of these systems, specifically Maximo 4.0.3 used by Utilities Water & Sewer and REM Star Center, is in need of immediate replacement and subject to failure at any time. Also, this software version is no longer supported by the vendor. Workflow and asset standards, where they exist, are not systematically applied in a uniform business approach.
Q3. What non-technology solutions have been considered?
A3. None
Q4. What will happen if we do nothing?
A4. By not implementing an enterprise-wide approach to asset management, County programs face potential accelerated asset failure, increased risk and liability, regulatory non-compliance, inefficient resource allocation, and less effective scheduling and planning. In addition, opportunities to reduce long-term costs in capital planning and maintenance will not be realized. Failure of existing Maximo 4.0.3 systems is expected to cause the following: data and functionality loss, increased operations and maintenance cost, increased replacement frequency and costs, reduced customer loyalty and satisfaction.
Q5. Is this request a phase of a current project initiative or new?
A5. This request is the Implementation Phase of the current Enterprise Asset Management project, consolidating the participating departments from multiple current work management systems to a uniform enterprise asset management approach.
Q6. Is this request being pursued for the current and/or a future budget year?
A6. Yes, Both

4.0 Request Summary *(Business to complete)*

In this section briefly describe the proposed solution, focusing on the benefits.
This is an opportunity to supplement the information in the rest of the business case.
Please do not exceed one page.

Pinellas County Government has been entrusted by its citizens to provide *sustainable service levels* and to exercise sound judgment to *optimize infrastructure longevity* . The financial constraints of recent years have enabled the County to seek more efficient and effective processes to provide these products and services. The Enterprise Asset Management Project explores the opportunity to implement an enterprise asset managment solution, to more effectively manage the life cycle of the physical and infrastructure assets and their associated costs to *achieve a desired level of service at an acceptable level of risk.*

Asset repairs and failures can be significantly reduced providing *greater continuity of services* and *mitigating risk* with an emphasis on planned maintenance. Assessing asset condition at regular intervals facilitates early *lower cost repairs* , *extends asset life* and allows for *asset longevity projections.* Long term budget financial impacts of up to 25 - 40 years in advance can be forecasted by *aggregating asset replacement costs* in fiscal year intervals. These projections enable *financial planning* to cover large capital expenditures for infrastructure replacement using diverse financial strategies.

Implementing enterprise level business processes and industry best practices helps to assure *consistent service delivery* , results in *more efficient use of resources* , and *increases customer satisfaction* . Data integrity improves with consistent business processes, establishment of a *single point of data entry* , and *automated data collection* . Practicing *root-cause analysis* aided by *spatial analysis* through GIS leads to more focused allocation of resources to resolve recurring problems and issues impacting large numbers of citizens.

The *mobility* capabilities empower the field employees to capture and utilize *real time information* and see the impact of their efforts on organizational performance.

Data analysis will provide the *true cost of business* , allow for *fact-based decision making* , development of *performance metrics* , enabling *improved cost control* and performance measures.

Implementation of EAM solution will serve as the foundational building blocks of *transforming the operational approach and business philosophy* from a work management approach to an enterprise asset management practice. The proposed and ongoing *cost of this project* amounts to *less than 1% of the total $4.0 Billion asset value managed by the participating departments (Util, SW, PW, REM and PCR).*

In the case of current Maximo 4.0.3 systems, upgrading is not a matter of ‘if’, but rather ‘when’. The longer implementation is delayed, the greater the risks of catastrophic system failures. *Consequences to the business* include asset failures and liabilities, regulatory violations, delayed services, damaged reputation, data loss for billing accountability, loss of revenue, inaccurate financial cost allocation, and decreased productivity.

The attached developed business case will reflect the compelling value of benefits to be realized by implementing the proposed system, while considering the associated risks.

5.0 Value Factors

5.1 Business Strategy Alignment *(Business to complete)*

Q1. How does the request align with Strategic Focus Area goals? Explain		
A1. The EAM project aligns with all five of the County's Strategic Plan focus elements: 1) Create a Quality Workforce in a Positive Supportive Organization, 2) Ensure Public Health, Safety, and Welfare, 3) Practice Superior Environmental Stewardship, 4) Foster Continual Economic Growth and Vitality, and 5) Deliver First Class Services to the Public and Our Customers. As shown in Section 5.5.4 Project Benefits, the EAM project contributes significantly to each of these strategic areas.		
Highlight the appropriate answer below	Value points	Score
No clear alignment with Strategic Focus Area (SFA) Business Plan Goals	0	
Some alignment to Strategic Focus Area (SFA) Business Plan Goals	3	
Significant alignment with Strategic Focus Area (SFA) Business Plan Goals	6	6

5.2 Business Impact *(Business to complete)*

Q1. Does this request only affect/benefit your department? (If yes, skip Q2 & Q3)		
A1. No. This is an enterprise level project initially impacting over 1,100 stakeholders.		
Q2. Does this request affect/benefit multiple departments? (If yes, list which ones)		
A2. Yes. Core participants include the Utilities, Solid Waste, Public Works, Real Estate Management, Parks & Conservation Resources.		
Q3. Does this request affect/benefit the entire organization? (If yes, describe how)		
A3. Yes. All County departments will be participating in generating service requests. Additionally, opportunities are envisioned for other departments.		
Place the appropriate number of value points in the Score cell	Value points	Score
Single Department	4	
Multiple Departments	8	
Organization-wide (Enterprise)	12	12

5.3 Citizen Facing *(Business to complete)*

Q1. Is this request for technology 'Citizen Facing', i.e. does it directly serve the public? Explain.		
A1. 1) Implementation of this project will serve the public by providing direct electronic interface to convert email complaints into service requests. Information and data generated by the EAM system will feed County web sites, publications, and communications that target the citizens of Pinellas County. The use of EAM will be transparent for stakeholders and public.		
Highlight the appropriate answer below	Value points	Score
No	0	
Yes, it provides some value to the public	5	
Yes, it provides significant value to the public	10	10

5.4 Qualitative Benefits *(Business to complete)*

If the answer is no, skip to next questions. If the answer is yes, provide an explanation and fill in the appropriate score. The scoring is all or nothing.	*Score*
Q1. Helps the department meet a major goal or initiative.	4
A1. Yes. This project aligns core departments with County Strategic Directions as stated in 5.1. EAM extends asset life, produces business process efficiencies, engages employees, and results in capacity building and reallocation of resources.	4
Q2. Supports mandatory functions or activities.	4
A2. Yes. Mandatory programs for the core departments include: Transportation/Stormwater/Drainage Capital Improvement, Road/Stormwater/Tree/Permitted Facilities Maintenance, Mowing, Sweeping, Vegetation and Mosquito Control, Traffic Sign and Signal Maintenance, Air Quality, Court Facility Maintenance, and Water and Sewer, and Solid Waste. These mandated programs protect public safety and secure public health.	4
Q3. Increases workload capacity or simplifies business processes.	3
A3. Yes. Documents and Standardizes workflow, streamlines business processes, enables sharing and improved allocation of resources. Builds capacity through increased efficiencies by leveraging integration with GIS and mobility capability. Supports effective long term planning and sustainability efforts.	3
Q4. Improves performance.	3
A4. Yes. Enables mobile functionality, increases work productivity, optimizes asset function and performance, facilitates continuous improvement, and validates established levels of service.	3
Q5. Enhances customer service (internal or external).	3
A5. Yes. The project enables real time responses to external and internal customers. Customers can send their comments and complaints electronically at their convenience. Provides consistent and reliable data to internal customers and auditors.	3
Q6. Improves ability to measure performance.	3
A6. Yes. Advanced reporting and multi-system integration will allow the County to move from output to outcome based performance measurement.	3
Q7. Improves management information and enhances decision-making.	3
A7. Yes. Real time data availability and condition monitoring capability will allow tracking and optimization of asset life-cycles. This will support informed decision-making regarding the balance of maintenance vs. replacement. Key performance indicators displayed on dashboards will facilitate information sharing throughout the organization.	3
Q8. Improves accuracy of data or information.	3
A8. Yes. Documented Standardized business processes, asset management practices, enterprise asset classifications, application interfaces, and mobile data input will preserve data integrity and provide consistent data analysis.	3
Q9. Improves program budgeting or activity based costing.	3
A9. Yes. Operating and Capital budgeting will be supported by life-cycle optimization and risk mitigation, Enables tracking of costs for services, materials, tools and labor by activity, location, GL account, or asset.	3
Q10. Improves transparency and accountability.	2
A10. Yes . Participating departments will utilize standardized business processes to allow uniform data collection and reporting. Data transparency across the enterprise will encourage greater accountability and identify opportunities for collaboration.	2
Q11. Improves or allows for internal and/or external information sharing.	2
A11. Yes. GIS capabilities will enhance spatial representation of data to internal and external customers to group work geographically and minimize travel time. Information sharing will allow departments to coordinate and schedule projects more effectively.	2
Q12. Helps meet industry best practices.	2
A12. Yes. Asset Management solution, along with GIS will facilitate the maintenance needs of County infrastructure. Asset Management is a globally recognized industry best practice.	2
Total Qualitative Benefits	**35**

5.5 Quantitative Benefits

This section is automatically populated using the Quantitative Benefits sheet 5.5.1. Please go to sections 5.5.1 through 5.5.4 at the end of the business case.		
	Value points	Score**
IRR < 0% and Total Project Benefits are < 25% of Total Project Costs	0	
IRR < 0% but Total Project Benefits are > 25% of Total Project Costs	5	
IRR < 0% but Total Project Benefits are > 50% of Total Project Costs	10	
IRR < 0% but Total Project Benefits are > 75% of Total Project Costs	15	
IRR > 0% and < 5%	20	
IRR > 5%	25	25

**These cells will populate when tabs 5.5.1-5.5.4 are completed.

5.6 Technology Impact *(Business and BTS to complete)*

Q1. Does the planned solution propose to build new, buy new or reuse existing technology, or some combination thereof? (Briefly describe 'what' along with the answer)		
A1. Implementation an Enterprise Asset Mgmt. solution, and replacing current disparate CMMS/WMS systems in use (Legacy)		
Highlight the appropriate answer below	Value points	Score
Build	0	
Buy	6	6
Reuse	12	

5.7 Value Factors Summary

This section is automatically populated by the scores inputted into sections 5.1 through 5.6. This section will automatically populate the decision square.		
Sections	Value points	**Score**
5.1 Business Strategy Alignment (6%)	6	**6**
5.2 Business Impact (12%)	12	**12**
5.3 Citizen Facing (10%)	10	**10**
5.4 Qualitative Benefits (35%)	35	**35**
5.5 Quantitative Benefits (25%)	25	**25**
5.6 Technology Impact (12%)	12	**6**
Total Value Score	100	**94**

6.0 Risk Factors

6.1 Business Risks *(Business to complete)*

Risk Type	Risk Questions *Place the appropriate score in the cells for each answer.*	Risk Points	Score
Business Process Change	There are no necessary modifications of business processes.	0	
	There are some business process modifications necessary.	4	
	There is a significant amount of business process modifications required.	7	7
Business Impact	There is only one department affected.	0	
	Several departments will be affected.	5	5
	Departments across the organization (enterprise-wide) will be affected.	9	
Business User Involvement	The users will be involved and have a permanent presence on the project team.	0	0
	The users will be available for consultation and to provide functional advice.	3	
	The users will be minimally engaged on the project and clarification of requirements is difficult.	5	
	The users will not be involved in the project.	7	
Business User Impact	The new system will impose very little, if any change upon the users.	0	
	The new system will require some changes by the users and may require some training.	4	
	The new system will require significant changes by the users and training.	7	7
Business Sustainability	No modifications to the new system are anticipated due to future business changes.	0	
	Few modifications to the new system are anticipated due to future business changes.	3	3
	Significant modifications to the new system are anticipated due to future business changes.	5	
		Total Business Risks	**22**

6.2 Financial Risks *(Business to complete)*

Risk Type	Risk Questions *Place the appropriate score in the cells for each answer.*	Risk Points	Score
Request Cost Estimates	Less than $100K	0	
	Between $100K and $500K	3	
	Between $500K and $1M	5	
	Greater than $1M	7	7
Vendor (if applicable)	Multiple vendors in the marketplace are well established and in good financial condition.	0	0
	Few vendors in the marketplace are well established and are in good financial condition.	4	
	There are no known 3rd party vendors established in the marketplace that are financially viable.	8	
		Total Financial Risks	**7**

6.3 Effort Risks *(Business and BTS to complete together)*

Risk Type	Risk Questions *Highlight the appropriate answer below*	Risk Points	Score
BTS Effort (from ROM)	Less than 500 hours	0	
	Between 500-1,000 hours	3	
	Between 1,000-2,000 hours	5	
	Greater than 2,000 hours	8	8
Implementation Experience (Vendor or BTS)	Implementer has successfully implemented this solution in comparable government organizations more than 5 times.	0	0
	Implementer has successfully implemented this solution in comparable government organizations less than 5 times.	6	
	Implementer has no record of successful implementation for this solution in comparable government organizations.	12	
		Total Effort Risks	**8**

6.4 Technology Risks *(BTS to complete)*

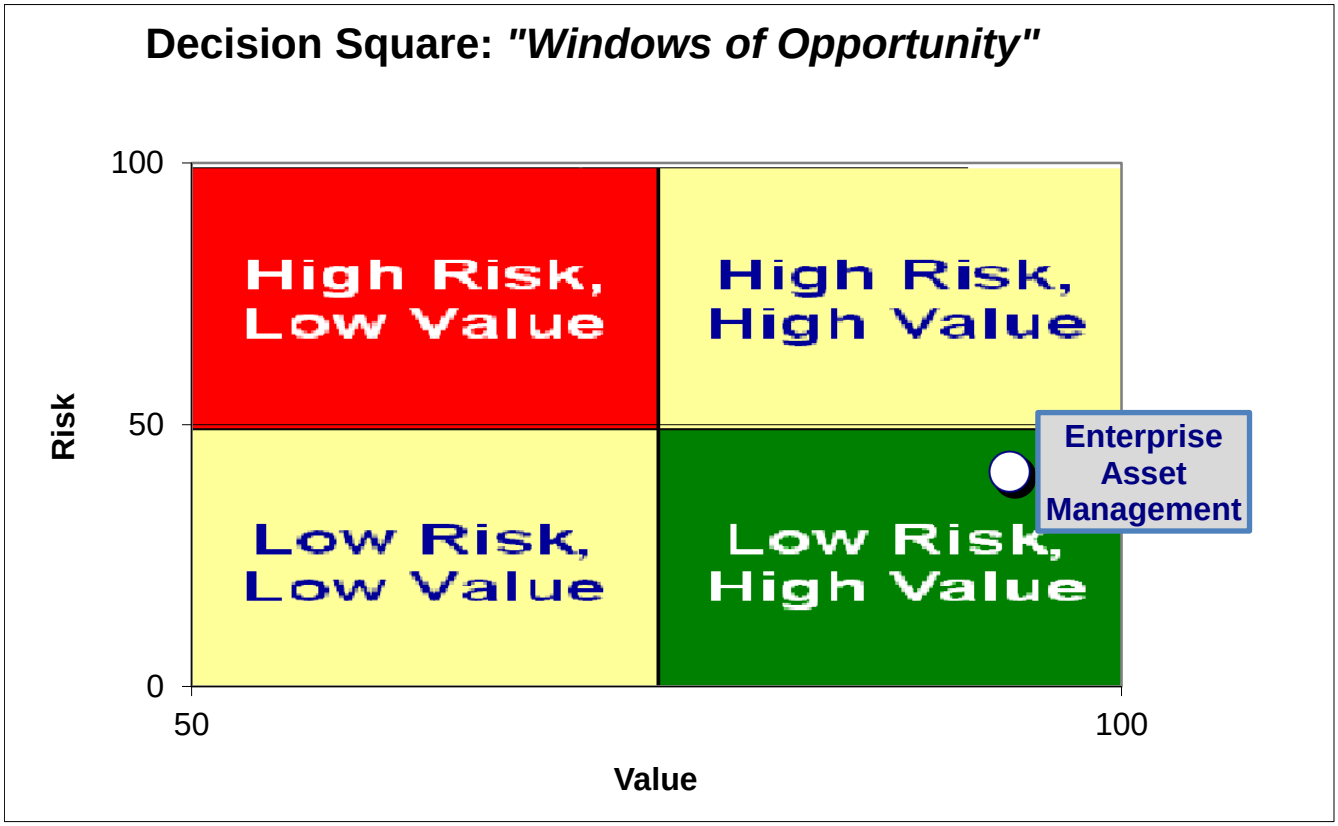
Risk Type	Risk Questions *Place the appropriate score in the cells for each answer.*	Risk Points	Score
Technical Methodology	Experienced technical specialists performed a comprehensive evaluation of options using a proven methodology.	0	0
	Experienced technical specialists made recommendations based on prior experiences.	1	
	Recommendations for the options were made by key functional personnel.	3	
	A detailed technical evaluation has not yet been performed.	5	
Technical Familiarity	The technology or application area is well understood.	0	0
	Parts of the technology or application area are well understood and some are not.	1	
	The technology or application area is not well understood internally but specialized expertise is available from vendors or constituents.	3	
	The technology or application area is not well understood internally and there is no specialized expertise available.	5	
Technical or Architectural Compatibility	This technology is completely compatible with the current technology architecture and it is supported internally	0	0
	The requested technology is compatible with the current technology or architecture but it is not supported internally	3	
	Aspects of the technology or architecture are compatible with the current technology or architecture.	6	
	The requested technology is incompatible with the current technology or architecture and not supported internally.	8	
Technical Dependencies and/or Constraints	A limited number of interfaces – (< 3)	0	
	A moderate number of interfaces – (3 to 5)	2	
	A large number of interfaces – (> 5)	4	4
	The number of interfaces is not known	6	
Technical Sustainability	There is every reason to believe that the proposed technology represents a solid foundation for the foreseeable future.	0	0
	Certain components may reach the end of their lifecycle before the system does, but there is a high probability that there will be an upgrade path for replacement	2	
	Certain components may reach the end of their lifecycle before the system does and there does not appear to be a logical upgrade path	4	
	Various components appear to have reached the end of their lifecycle and more advanced technology exists in the market or technology foundation has yet to be determined	6	
		Total Technology Risks	**4**

6.5 Risk Factors Summary

This section is automatically populated by the scores inputted into sections 6.1 through 6.4. This section will automatically populate the decision square.		
Sections	Value points	**Score**
6.1 Business Risks (35%)	35	**22**
6.2 Financial Risks (15%)	15	**7**
6.3 Effort Risks (20%)	20	**8**
6.4 Technology Risks (30%)	30	**4**
Total Risk Score	100	**41**

7.0 Decision Square: "Windows of Opportunity"

This section is automatically populated by 5.7 and 6.5. This section will automatically populate the decision square chart		
Sections	Value points	**Score**
5.7 Total Value Score	100	**94**
6.5 Total Risk Score	100	**41**



5.5.1 Quantitative Benefits Summary

The purpose of the Quantitative Benefits (section 5.5) of the Business Case is to attempt to analyze the financial impact of the proposed project. The 3 main items that will be addressed are:

(1) **BTS Costs** - include one-time costs such as software, hardware, and implementation costs as well as recurring ongoing support costs.

(2) **Business Costs** - include one-time and recurring costs to a department from implementing a new technology project. If grant funds or other outside funding (such as intergovernmental) are secured, show as a negative cost at the bottom.

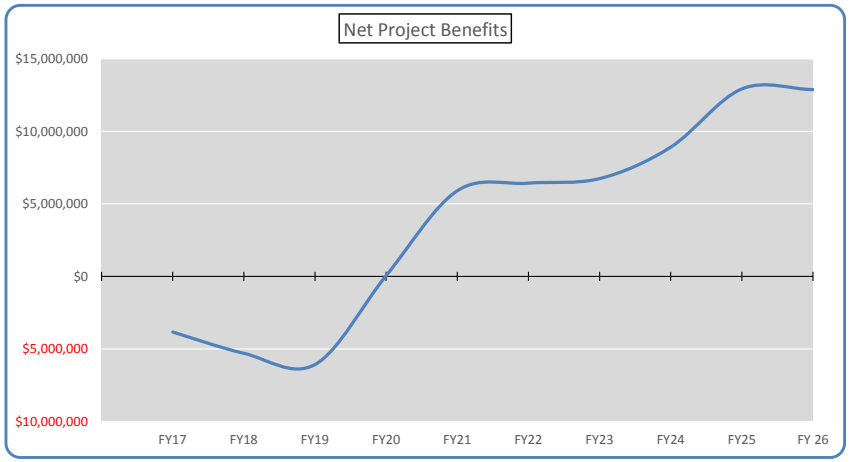
(3) **Project Benefits** - include savings or cost avoidance that are expected to be realized by the project, starting after project completion.

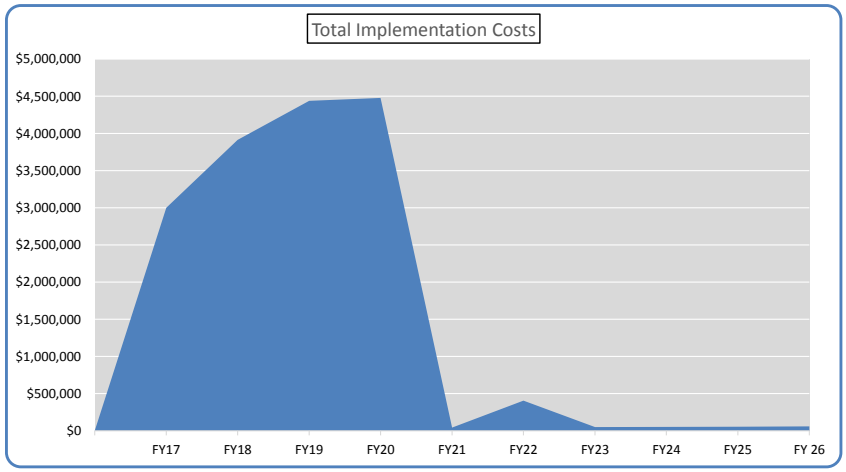
These 3 items are summarized in the Quantitative Benefits Summary below that will feed section 5.5 in the Business Case. The information below does not need to be

Internal Rate of Return(IRR)	**25.2%**
Project Benefits as % of Total Project Costs	**190.3%**

Quantitative Benefits Summary											
	FY17	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY 26**	**Total**
Total BTS Costs (One-Time)	2,411,850	3,325,904	3,061,651	1,632,093	42,500	404,700	48,900	52,100	55,300	58,500	11,093,498
Total BTS Costs (Recurring)	835,413	1,389,078	1,640,502	3,127,858	1,025,404	1,064,113	1,104,498	1,146,651	1,190,673	1,236,667	13,760,858
Total Business Costs (One-Time)	587,400	587,400	1,375,870	2,845,259	0	0	0	0	0	0	5,395,929
Total Business Costs (Recurring)	0	0	0	0	2,011,850	2,131,850	2,131,850	2,011,850	2,131,850	2,131,850	12,551,100
Total Project Costs	3,834,663	5,302,383	6,078,023	7,605,211	3,079,754	3,600,663	3,285,248	3,210,601	3,377,823	3,427,017	**42,801,385**
Total *Implementation* Costs	2,999,250	3,913,304	4,437,521	4,477,352	42,500	404,700	48,900	52,100	55,300	58,500	16,489,427

Total Project Benefits	0	0	0	7,657,329	8,982,164	10,028,603	10,028,603	12,121,480	16,307,234	16,307,234	**81,432,647**
Total Project Costs	3,834,663	5,302,383	6,078,023	7,605,211	3,079,754	3,600,663	3,285,248	3,210,601	3,377,823	3,427,017	**42,801,385**
Net Project Benefits	-3,834,663	-5,302,383	-6,078,023	52,118	5,902,410	6,427,940	6,743,355	8,910,879	12,929,411	12,880,217	**38,631,262**





EAM Project Budget	Project Implementation				Ongoing Costs						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	Total
BTS Project Team Labor One-Time											
Project Sponsor	153,483	158,088	162,830	83,858							**558,259**
Project Manager	130,562	134,479	138,513	71,334		***NOTE -***					**474,888**
Org. Chg. Mgr. Lead	96,138	99,022	101,992	52,526		*BTS Positions salaries fully burdened & inclusive of Annual 3% COLA each year*					**349,678**
BTS Project Team (One-Time) Total	**380,183**	**391,588**	**403,336**	**207,718**							**1,382,825**
Project & Ongoing Labor Support											
BTS COTS Support; Info Tech Analyst, Sr. 14678; P1	90,441	124,206	127,932	131,770	135,723	139,795	143,988	148,308	152,757	157,340	**1,352,259**
BTS COTS Support; Info Tech Analyst 14676; P2	-	52,177	107,485	110,710	114,031	117,452	120,975	124,605	128,343	132,193	**1,007,970**
BTS GIS Support; Info Tech Analyst 14676: P2	75,986	104,354	107,485	110,709	114,030	117,451	120,975	124,604	128,342	132,193	**1,136,129**
BTS Infrastructure Support; Info Tech Analyst 14676: P2	77,986	104,354	107,485	110,709	114,030	117,451	120,975	124,604	128,342	132,193	**1,138,129**
BTS Mobility Support Position ; Info Tech Tech 14672: P4	-	42,516	87,583	90,210	92,917	95,704	98,575	101,532	104,578	107,716	**821,332**
BTS Mobility Support Position ; Info Tech Tech 14672: P4	-	42,516	87,583	90,210	92,917	95,704	98,575	101,532	104,578	107,716	**821,332**
BCC Business Support Staff/Backfill- See 5.5.3 Business Tab	587,400	587,400	659,995	2,125,184	1,466,850	1,466,850	1,466,850	1,466,850	1,466,850	1,466,850	**12,761,079**
Project & Ongoing Labor Support Total	**831,813**	**1,057,522**	**1,285,546**	**2,769,502**	**2,130,498**	**2,150,407**	**2,170,914**	**2,192,036**	**2,213,791**	**2,236,200**	**19,038,230**
BTS Ongoing Support Costs (Recurring)											
SMS Server Maintenance (ELM Impact)	-	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	**20,160**
Expand Network Bandwidth (Add 50Mbps) (ELM Impact)	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	**36,000**
Server Software License Maintenance	-	106,316	106,316	106,316	106,316	106,316	106,316	106,316	106,316	106,316	**956,844**
Storage/Backup Software License Maint	-	19,400	22,800	26,200	29,600	33,000	36,400	39,800	43,200	46,600	**297,000**
Azteca Cityworks AMS License Maintenance	-	200,000	220,000	220,000	220,000	235,400	251,878	269,509	288,375	308,561	**2,213,724**
BTS Ongoing Support Costs Total	**3,600**	**331,556**	**354,956**	**358,356**	**361,756**	**380,556**	**400,434**	**421,465**	**443,731**	**467,317**	**3,523,728**
User Training & Travel											
Azteca Cityworks Conferences	-	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	120,000
Esri GIS Conferences	-	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	120,000
GIS Esri Training	-	-	25,000	25,000	-	-	-	-	-	-	50,000
EAM Solution Conferences	-	-	15,000	15,000	-	-	-	-	-	-	30,000
Esri GIS Conferences	-	-	15,000	15,000	-	-	-	-	-	-	30,000
User Training & Travel Total	**-**	**-**	**85,000**	**85,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**350,000**
Operating Expenses											
Purchase Laptops	-	-	90,000	90,000	-	120,000	120,000	-	120,000	120,000	660,000
Purchase Docking Station & Monitor (15%)	-	-	3,375	3,375	-	-	-	-	-	-	6,750
Purchase Mounting Brackets (100%)	-	-	22,500	22,500	-	-	-	-	-	-	45,000
Purchase Tablets (Est 200 units, 100 replaced annually)	-	-	227,000	227,000	227,000	227,000	227,000	227,000	227,000	227,000	1,816,000
Purchase Barcode Scanners	-	-	-	4,200	-	-	-	-	-	-	4,200
Mi-Fi/Air Card Service	-	-	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	2,304,000
Operating Expenses Total	**-**	**-**	**630,875**	**635,075**	**515,000**	**635,000**	**635,000**	**515,000**	**635,000**	**635,000**	**4,835,950**
BTS Hardware Costs (One-Time)											
Estimated Server Purchase Costs	332,000	-	-	-	-	332,000	-	-	-	-	**664,000**
Estimated Storage	84,000	32,900	36,100	39,300	42,500	45,700	48,900	52,100	55,300	58,500	**495,300**
Cisco Nexus switch	27,000	-	-	-	-	27,000	-	-	-	-	**54,000**
Business Continuity & Disaster Recovery (One-Time)	-	475,900	-	-	-	-	-	-	-	-	**475,900**
BTS Hardware Costs (One-Time) Total	**443,000**	**508,800**	**36,100**	**39,300**	**42,500**	**404,700**	**48,900**	**52,100**	**55,300**	**58,500**	**1,689,200**
Software Licensing (One-Time)											
Azteca Cityworks AMS Software Licensing	180,000	-	-	-	-	-	-	-	-	-	**180,000**
Software Licensing (One-Time) Total	**180,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**180,000**
Summary of Vendor Costs & Services											
Phase 1 of 2 (approx. 30 months); X=Done in Year n											
Planning	X										
Design	X										
Configuration	X										
ISO 55K Asset Mgmt. Program Development	X										
Phase 2 of 2 (approx. 16 months); X=Done in Year n											
Advanced Configuration			X								
Integration & Interfaces			X								
Data Migration			X								
Deployment, Implementation			X								
GO Live			X								
Other Costs			X								
Vendor Costs & Services Total	**1,408,667**	**2,425,516**	**1,991,340**	**750,000**							**6,575,523**

BTS Fund	**FY17**	**FY18**	**FY19**	**FY20**	**FY21+**						
Total BTS Costs (One-Time)	**2,411,850**	**3,325,904**	**3,061,651**	**1,632,093**	**42,500**	**404,700**	**48,900**	**52,100**	**55,300**	**58,500**	**11,093,498**
Total BTS Costs (Recurring)	**835,413**	**1,389,078**	**1,640,502**	**3,127,858**	**1,025,404**	**1,064,113**	**1,104,498**	**1,146,651**	**1,190,673**	**1,236,667**	**13,760,858**
Total Project Need by Fiscal Year	**3,247,263**	**4,714,983**	**4,702,153**	**4,759,951**	**1,067,904**	**1,468,813**	**1,153,398**	**1,198,751**	**1,245,973**	**1,295,167**	**24,854,356**
Total Project Need over 46 Months	**17,424,350**										

Non-BTS Funds (Business)											
Total Business Costs (One-Time)	-	-	-	-	-	-	-	-	-	-	-
Total Business Costs (Recurring)	**-**	**-**	**-**	**-**	**2,011,850**	**2,131,850**	**2,131,850**	**2,011,850**	**2,131,850**	**2,131,850**	**17,947,029**
Total	-	-	-	-	**2,011,850**	**2,131,850**	**2,131,850**	**2,011,850**	**2,131,850**	**2,131,850**	**17,947,029**

	Project Implementation				Ongoing Costs						
Business Implementation Costs 5.5.3	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Total**
Expenditure Description											
Business Implementation Staffing											
Project Trainers (3*Special Projects - 16 mos.)	-	-	54,996	164,988	-	-	-	-	-	-	219,984
Public Works Implementation Staffing											
Core Team member	98,000	98,000	98,000	98,000	24,500	24,500	24,500	24,500	24,500	24,500	539,000
Data Steward	-	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000	455,000
Functional Data Administrator	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	525,000
Business Systems Analyst	-	-	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	420,000
GIS Support Technician (4 Positions Already in BTS Budget)	-	-	-	-	-	-	-	-	-	-	-
Public Works Implementation Staffing Total	**98,000**	**98,000**	**98,000**	**298,000**	**224,500**	**224,500**	**224,500**	**224,500**	**224,500**	**224,500**	**1,939,000**
Utilities Implementation Staffing											
Core Team member	75,000	75,000	75,000	75,000	18,750	18,750	18,750	18,750	18,750	18,750	412,500
Data Steward	-	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000	455,000
Functional Data Administrator	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	525,000
Business Systems Analyst	-	-	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	420,000
GIS Support Technician (4 Positions Already in BTS Budget)	-	-	-	-	-	-	-	-	-	-	-
Utilities Implementation Staffing Total	**75,000**	**75,000**	**75,000**	**275,000**	**218,750**	**218,750**	**218,750**	**218,750**	**218,750**	**218,750**	**1,812,500**
Solid Waste Implementation Staffing											
Core Team member	60,000	60,000	60,000	60,000	15,000	15,000	15,000	15,000	15,000	15,000	330,000
Data Steward	-	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000	455,000
Functional Data Administrator	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	525,000
Business Systems Analyst	-	-	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	420,000
GIS Support Technician (4 Positions Already in BTS Budget)	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Implementation Staffing Total	**60,000**	**60,000**	**60,000**	**260,000**	**215,000**	**215,000**	**215,000**	**215,000**	**215,000**	**215,000**	**1,730,000**
REM Implementation Staffing											
Core Team member	109,000	109,000	109,000	109,000	27,250	27,250	27,250	27,250	27,250	27,250	599,500
Data Steward	-	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000	455,000
Functional Data Administrator	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	525,000
Business Systems Analyst	-	-	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	420,000
GIS Support Technician (4 Positions Already in BTS Budget)	-	-	-	-	-	-	-	-	-	-	-
REM Implementation Staffing Total	**109,000**	**109,000**	**109,000**	**309,000**	**227,250**	**227,250**	**227,250**	**227,250**	**227,250**	**227,250**	**1,999,500**
PCR Implementation Staffing											
Core Team member	103,000	103,000	103,000	103,000	25,750	25,750	25,750	25,750	25,750	25,750	566,500
Data Steward	-	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000	455,000
Functional Data Administrator	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	525,000
Business Systems Analyst	-	-	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	420,000
GIS Support Technician (4 Positions Already in BTS Budget)	-	-	-	-	-	-	-	-	-	-	-
PCR Implementation Staffing Total	**103,000**	**103,000**	**103,000**	**303,000**	**225,750**	**225,750**	**225,750**	**225,750**	**225,750**	**225,750**	**1,966,500**
Business Implementation Staffing Total +32%	**587,400**	**587,400**	**659,995**	**2,125,184**	**1,466,850**	**1,466,850**	**1,466,850**	**1,466,850**	**1,466,850**	**1,466,850**	**12,761,079**
User Training & Travel											
Azteca Cityworks Conferences	-	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	120,000
Esri GIS Conferences	-	-	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	120,000
GIS Esri Training	-	-	25,000	25,000	-	-	-	-	-	-	50,000
EAM Solution Conferences	-	-	15,000	15,000	-	-	-	-	-	-	30,000
Esri GIS Conferences	-	-	15,000	15,000	-	-	-	-	-	-	30,000
User Training & Travel Total	**-**	**-**	**85,000**	**85,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**350,000**
Operating Expenses											
Purchase Laptops	-	-	90,000	90,000	-	120,000	120,000	-	120,000	120,000	660,000
Purchase Docking Station & Monitor (15%)	-	-	3,375	3,375	-	-	-	-	-	-	6,750
Purchase Mounting Brackets (100%)	-	-	22,500	22,500	-	-	-	-	-	-	45,000
Purchase Tablets	-	-	227,000	227,000	227,000	227,000	227,000	227,000	227,000	227,000	1,816,000
Purchase Barcode Scanners	-	-	-	4,200	-	-	-	-	-	-	4,200
Mi-Fi/Air Card Service	-	-	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	2,304,000
Operating Expenses Total	**-**	**-**	**630,875**	**635,075**	**515,000**	**635,000**	**635,000**	**515,000**	**635,000**	**635,000**	**4,835,950**

Fiscal Year Impact	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**FY26**	**Total**
Business Implementation Inclusive Costs	587,400	587,400	1,375,870	2,845,259							**5,395,929**
Business Ongoing Costs					2,011,850	2,131,850	2,131,850	2,011,850	2,131,850	2,131,850	**12,551,100**
										10 Year Fiscal Impact	**17,947,029**

5.5.4 Project Benefits
(Business to complete)

				FY 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Benefit Type	**Description**	**Cost Center**	**Annual or One Time**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Total**	**Assumptions**
Cost Savings, Efficiency, Risk Avoidance	**Control Inventory and Optimize Asset Use - Shift to Planned Maintenance, Life Cycle Analysis, Extend Asset Longevity, and Control Parts and Materials. Target Cost Savings = 2% Controllable Operating Expense Budget**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	$0	1,046,438	2,092,877	2,092,877	4,185,754	4,185,754	4,185,754	**17,789,454**	Controllable Operating Expense Efficiencies 0.5% Year 5 1% Year 6 1% Year 7 2% Year 8 thru 10
Cost Savings, Efficiency	**Enterprise Standardization - Improve Business Processes and Workflow; Single Point Data Entry for Field, Purchasing, Inventory, & Receiving; Retire Legacy Systems. Target Cost Savings = 1% Controllable Operating Expense Costs**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	$0	2,092,877	2,092,877	2,092,877	2,092,877	2,092,877	2,092,877	**12,557,262**	Controllable Operating Expense Efficiencies 1% Year 5 thru 9
Cost Savings, Efficiency, Risk Avoidance	**Integrated GIS - Spatial Analysis, Schedule and Route Work Geographically, AVL, Root Cause Analysis, Hot Spot Analysis. Target Cost Savings = 2% Controllable Operating Expense Budget**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	$0	2,092,877	2,092,877	2,092,877	2,092,877	4,185,754	4,185,754	**16,743,016**	Controllable Operating Expense Efficiencies 1% Year 5 thru 8 2% Year 9 thru 10
Cost Savings, Efficiency	**Support Fact-Based Decision Making - Data Analysis, Root Cause Analysis, Asset Condition Assessment, Just In Time Asset Repairs and Replacement. Target Cost Savings = 2% Controllable Operating Expense Budget**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	$0	2,092,877	2,092,877	2,092,877	2,092,877	4,185,754	4,185,754	**16,743,016**	Controllable Operating Expense Efficiencies 1% Year 5 thru 8 2% Year 9 thru 10
Customer Satisfaction	**Increase Customer Satisfaction -Identify, Optimize and sustain service delivery level of core services. Increase Community Partnership through leadership and improved communication.**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	Baseline	3%	3%	3%	3%	3%	3%	**0**	Baseline Customer Satisfaction = Year 4 Increase Customer Satisfaction for Core services by 3% = Year 5 thru 10
Cost Savings, Efficiency, Mobile Workforce	**Optimize use of Mobile Technology - Time Saving, Responsive, Real-time Information Available, Empowered & engaged staff. Target Cost Reallocation = 7 FTE's = $350,000 Realize 2% efficiencies in personal services = $1,657,095**	**REM, PCR, Util, PW, SW**	**Annual**	$0	$0	$0	$0	$1,657,095	$1,657,095	$1,657,095	$1,657,095	$1,657,095	$1,657,095	**9,942,570**	Personal services efficiencies of 2% per year realized through attrition, capacity bandwidth, and productivity enhancements. Data Entry/Analyst positions @ $50,000/yr. reallocated to QA/QC and data analysis. Year 4 = 3 FTE's, Years 5 thru 10 = 7 FTE's
Risk Avoidance	**Prevent Catastrophic Failure of Obsolete/Unsupported Maximo 4.0.3 Version Systems - Reduced Productivity, Loss of Revenue, Cost Allocation Disruption, Loss of Data, Challenges to Locate Operable Replacement Hardware due to Obsolescence, Hardware Replacement Cost, Level of Customer Service Decrease**	**Util & REM STAR Center**	**Unplanned Event**				**7,657,329**							**7,657,329**	In the event of a catastrophic failure, recovery time of the existing system is at least 2 months with 35% decline in productivity. Reflected in Y2, due to high probability failure of hardware/software/data. This is a fix, not an application upgrade, therefore future risk is not completely mitigated.
	Total Benefits			-	-	-	**7,657,329**	**8,982,164**	**10,028,603**	**10,028,603**	**12,121,480**	**16,307,234**	**16,307,234**	**81,432,647**	Estimated efficiencies which could be leveraged across the Enterprise EAM departments, by adherence to the established EAM Program framework, business processes, analytics, and funding forecasting.

Explanation of Assumptions Used to Complete this Information

Source of Budgets data is OMB FY16 Adopted Budget for each of the EAM participating departments

Personal Services Costs & Controllable Costs

ET&S = $3,163,090 & $806,690
PCR = $8,387,550 & $5,776,720
PW = $23,597,620 & $34,132,480
REM = $13,461,520 & $38,929,110
SW = $5,713,470 & $84,476,860
Util = $28,531,510 & $45,165,850

Total **Personal Services** Costs = $82,854,760 1% Total Personal Services Costs = $828,548 2% Total Personal Services Costs = $1,657,095

Total **Operating Controllable** Costs = $209,287,710 1% Total Controllable Costs = $2,092,877 2% Total Controllable Costs = $4,185,754 3% Total Controllable Costs = $6,278,631
4% Total Controllable Costs = $8,371,508 5% Total Controllable Costs = $10,464,386

Risk Avoidance Costs

Utilities Water & Sewer = $73,697,360 Annual Operating and Personal Services Budget (No Regional Water)
REM STAR Center = $8,909,630 Annual Operating and Personal Services Budget
BTS = $500,000 Hardware Installation and Recovery Cost

EAM participating departments Major Budget Components, for FY2016, as a reference

	ET&S	PCR	PW	REM	SW	Util	*Row Totals*
Personal Svcs	$ 3,163,090	$ 8,387,550	$ 23,597,620	$ 13,461,520	$ 5,713,470	$ 28,531,510	$ 82,854,760
Operating Expenses	$ 806,690	$ 5,776,720	$ 34,132,480	$ 38,929,110	$ 84,476,860	$ 45,165,850	$ 209,287,710
Column Sub-Total	$ 3,969,780	$ 14,164,270	$ 57,730,100	$ 52,390,630	$ 90,190,330	$ 73,697,360	$ 292,142,470

JJF: Includes $66.2M for Contract Services - Other

JJF: Does not include Regional Water purchase of $41.0M

Notes:

1. Data does not include Capital Outlay, Machinery & Equipment, Grants & Aids, Transfers, Reserves, Contingencies, Debt Svcs, Regional Water
2. ET&S is in process of restructuring and will be embedded within the functional areas of Public Works and Utilities (80/20 split)

Potential Savings Reductions	*1%*	*2%*	*3%*	*4%*	*5%*
Personal Svcs	$ 828,548	$ 1,657,095	$ 2,485,643	$ 3,314,190	$ 4,142,738
Operating Expenses	$ 2,092,877	$ 4,185,754	$ 6,278,631	$ 8,371,508	$ 10,464,386