Oakland County
Department of Information Technology
Project Scope and Approach

Project Name: CAMS Enterprise Enhancements 2019-20   **Project ID: D19182CE**

Leadership Group: Land	
Department: Information Technology	**Division:** Application Services
Project Sponsor: Tammi Shepherd	**Date Requested:** 1/31/18 **PM Customer No.** 182

Request Type: *__New Development__*   *Enhancement*   *Customer Support*

Planned System Maintenance or Upgrade

IT Team Name: Infrastructure and GIS	**IT Team No:** 1

Project Manager/Leader: Dennis Faustich

Account Number: 30003	**Account Description:** IT APP SVCS GIS	**Customer Name:** Application Services

Grant Funded? Yes **No** X	**Mandate?** **Yes** **No** X
	Mandate Source:

Project Goal

Implement enterprise enhancements for the CAMS initiative for asset management, permit management, and citizen requests/complaints Countywide so that efficiencies can be gained in the support and maintenance of the system and enterprise enhancements can be implemented.

Business Objective

To implement non-customer specific enterprise enhancements to Cityworks and the Customer Request Portal that will result in more efficient delivery of system support and maintenance.

Major Deliverables
- System enhancements to improve enterprise processes and tools used to support and maintain the CAMS system.
- Optimize/Automate State Zero Process
- AGO App/Map Configuration
- Cityworks App Configuration
- Additional Reporting (SQL Server Reporting Service)
- CAMS Server Right Sizing to support AGO Services
- Local User Groups
- Road Centerline Enterprise/CAMS Workflow
- Update CAMS GIS Metadata
- Enhancements related to Cityworks/GIS Upgrade

Approach
- Determine, document and implement enterprise application enhancements and improvements to internal or external processes.
- On-Site User Groups for each Domain

- Install/Test new Cityworks Apps
- User Trainings for new functionality related to CAMS Upgrade
- Update DR Toolkit

Research & Analysis

Gartner Research Recommendation

Azteca Systems has consolidated its solutions in an application suite named Cityworks. The company partners with local government organizations to modernize areas related to public infrastructure, asset management, work management, permits and licensing. The firm utilizes a GIS-centric approach to provide important location-based information for local government activities. Cityworks is positioned to help local governments migrate to a hybrid environment of on-premises applications, supplemented by online SaaS products and services. The primary Cityworks applications are:

Cityworks Server AMS — Helps local government manage capital assets and infrastructure. It schedules, manages and tracks service requests; work orders; inspections; tests; condition assessments; resources; storerooms; projects; and contracts for water, wastewater and storm water; streets; traffic and transportation; parks; trees and recreation; facility management; electric; gas; and telecommunications.

Cityworks Server PLL — Helps local governments manage the permit, licensing and land management processes across the following categories: planning and zoning, contractors, businesses, trades, hazardous waste, alcohol sales, utility connection, and right of way.

NACo Application Store

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users   800

Divisions   WRC, Parks & Recreation, FM&O, RCOC, and the Cities of
Auburn Hills, Farmington Hills, and Ferndale.

Leadership Groups   Land

Project Name: CAMS Enterprise Enhancements 2019-20   **Project ID: D19182CE**

Risk

Business Environment   Medium - Project will require some changes to existing business processes.

Technical Environment   Medium - Previously implemented technologies with new aspects and/or new requirements.

Assumptions

Staffing   IT Staffing: resources will be available for the hours indicated per the attached project plan.

Other Staffing: additional staffing will be available as follows:

Role:	Name	Hours per Day
Project Sponsor:	Tammi Shepherd	

Facilities

-
-

Technical

-
-

Funding

- Information Technology

Other

- Department specific enhancement requests will be facilitated and funded through departmental enhancement and program budgets

Priority

Project Name: CAMS Enterprise Enhancements 2019-20   **Project ID: D19182CE**

Constraints

- Enhancement Requests will be reviewed by CAMS User Group which is comprised of representatives from each of the participating agencies.

-

Exclusions

-
-

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Project Scope and Approach

Project Name: CAMS Enterprise Enhancements 2019-20   **Project ID: D19182CE**

PROJECT PHASE AUTHORIZATION

Phase(s):		
Total Estimated Application Services	**Hours: 919**	
Total Estimated Technical Systems	**Hours: 81**	
Total Estimated CLEMIS	**Hours:**	
Total Estimated Internal Services	**Hours:**	
IT Application Services Division Manager Approval:		**Date:**
IT Technical Systems Division Manager Approval:		**Date:**
IT CLEMIS Division Manager Approval:		**Date:**
IT Internal Services Division Manager Approval:		**Date:**
IT Management Approval:		
Approved: Yes No		Date:
Reason:		
Project Sponsor Approval:		
Title:		Date:

PROJECT SUMMARY

Authorized Development (see above)	**Hours: 1000**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 1000**	**Cost: $165,000**

Project Name: CAMS Enterprise Enhancements 2019-20   **Project ID: D19182CE**

PROJECT COMPLETION AUTHORIZATION

Customer Acceptance of Product:	
Title:	Date:
Project Office Review:	Date:

CAMS Enterprise Enhancements 2019-20 - Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated	Estimate Notes
1					
2				Hours	
3	3	000000	CAMS ENTERPRISE ENHANCEMENTS 2019-20	1,000	
4				1,000	

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Project Summary

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Benefits/Savings:							
Tangible Benefits Subtotal:	0	0	0	0	0	0	0
Cost Avoidance Subtotal:	56,360	56,360	56,360	56,360	56,360	56,360	338,160
Costs:							
Development Services Subtotal:	165,000	24,750	0	0	0	0	189,750
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal	0	0	0	0	0	0	0
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	56,360	56,360	56,360	56,360	56,360	56,360	338,160
Annual Total Costs	165,000	24,750	0	0	0	0	189,750
Annual Return on Investment	(108,640)	31,610	56,360	56,360	56,360	56,360	148,410
Annual Costs/Savings Ratio	292.76%	43.91%	0.00%	0.00%	0.00%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	56,360	112,720	169,080	225,440	281,800	338,160	338,160
Cumulative Total Costs	165,000	189,750	189,750	189,750	189,750	189,750	189,750
Cumulative Return on Investment	(108,640)	(77,030)	(20,670)	35,690	92,050	148,410	148,410
Cumulative Cost/Savings Ratio	292.76%	168.34%	112.22%	84.17%	67.33%	56.11%	56.11%
Year Positive Payback Achieved				Year 4			Year 4
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Savings	Annual Multiplier
Provide enterprise level enhancments to CAMS that result in improved functionality and customer time savings	Intangible Benefit					0	
Provide enhancements to IT processes that result in reduced cost of ownership for the CAMS system.	Intangible Benefit					0	
Make CAMS data more accessible to field staff	Intangible Benefit					0	
Implement new functionality available in latest vendor release	Intangible Benefit					0	
Provide security enhancements for a more secure system and better user experience.	Intangible Benefit					0	
Automating CAMS State Zero process will save 5 hrs per month (12).	Cost Avoidance		HR	60	165	9,900	1.000
Right Sizing Servers will improve application performance which will save CAMS users approximately 0.5 hrs /year.	Cost Avoidance		HR	500	85	42,500	1.000
Updating the CAMS Metadata will help reduce 1-2 Service Center Incidents /month.	Cost Avoidance		HR	24	165	3,960	1.000
						0	
						0	
						0	

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Affects Project ROI?						Potential Savings Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6
Provide enterprise level enhancments to CAMS that result in improved functionality and customer time savings	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Provide enhancements to IT processes that result in reduced cost of ownership for the CAMS system.	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Make CAMS data more accessible to field staff	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Implement new functionality available in latest vendor release	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Provide security enhancements for a more secure system and better user experience.	Intangible Benefit	x	x	x	x	x	x	0.00	0.00	0.00	0.00	0.00	0
Automating CAMS State Zero process will save 5 hrs per month (12).	Cost Avoidance	x	x	x	x	x	x	9,900.00	9,900.00	9,900.00	9,900.00	9,900.00	9,900
Right Sizing Servers will improve application performance which will save CAMS users approximately 0.5 hrs /year.	Cost Avoidance	x	x	x	x	x	x	42,500.00	42,500.00	42,500.00	42,500.00	42,500.00	42,500
Updating the CAMS Metadata will help reduce 1-2 Service Center Incidents /month.	Cost Avoidance	x	x	x	x	x	x	3,960.00	3,960.00	3,960.00	3,960.00	3,960.00	3,960

Oakland County -- CAMS Enterprise Enhancements 2019-20

As Of: 1/31/2018

Return on Investment Analysis

Savings Summary

Benefit/Savings Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Tangible Benefit:							
Tangible Benefits Subtotal:							
Cost Avoidance:							
Automating CAMS State Zero process will save 5 hrs per month (12).	9,900	9,900	9,900	9,900	9,900	9,900	59,400
Right Sizing Servers will improve application performance which will save CAMS users approximately 0.5 hrs /year.	42,500	42,500	42,500	42,500	42,500	42,500	255,000
Updating the CAMS Metadata will help reduce 1-2 Service Center Incidents /month.	3,960	3,960	3,960	3,960	3,960	3,960	23,760
Cost Avoidance Subtotal:	*56,360*	*56,360*	*56,360*	*56,360*	*56,360*	*56,360*	*338,160*
Intangible Benefit:							
Provide enterprise level enhancments to CAMS that result in improved functionality and customer time savings	`	*0*	*0*	*0*	*0*	*0*	
Provide enhancements to IT processes that result in reduced cost of ownership for the CAMS system.	*0*	*0*	*0*	*0*	*0*	*0*	
Make CAMS data more accessible to field staff	*0*	*0*	*0*	*0*	*0*	*0*	
Implement new functionality available in latest vendor release	*0*	*0*	*0*	*0*	*0*	*0*	
Provide security enhancements for a more secure system and better user experience.	*0*	*0*	*0*	*0*	*0*	*0*	
Savings Total:	*56,360*	*56,360*	*56,360*	*56,360*	*56,360*	*56,360*	*338,160*

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?					
								Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs			1,000	165	165,000		x					
IT Hours - System Maintenance	Development Svcs			50	165	8,250			x				
IT Hours - Customer Support	Development Svcs			50	165	8,250			x				
IT Hours - Planned Maintenance	Development Svcs			50	165	8,250			x				
User Hours - New Development	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services	Development Svcs					0							
PC System - Acquisition	Hardware				814	0							
PC System - Maintenance	Hardware				2,304	0							
Notebook - Acquisition	Hardware				1,223	0							
Notebook - Maintenance	Hardware				2,372	0							
Tablet Notebook - Acquisition	Hardware				2,012	0							
Tablet Notebook - Maintenance	Hardware					0							
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,104	0							
Image Workstations - Acquisition	Hardware					0							
Image Workstations - Maintenance	Hardware				3,496	0							
PC Maintenance User Owned	Hardware				2,304	0							
Printer Maintenance User Owned	Hardware				1,072	0							
File Space (100GB)	Hardware		ANN		173	0							
Internet Bandwidth per MB	Hardware		ANN		750	0							
Package Software - Acquisition	Software					0							
Package Software - Maintenance	Software					0							
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0							
Term Emulation SFTW-Maintenance	Software					0							
Server - Acquisition/Upgrade	Infrastructure				8,000	0							
Server - Maintenance	Infrastructure				360	0							
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0							
Server Sftwre - Maintenance	Infrastructure					0							
Server Rack Mount	Infrastructure				400	0							
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure				21,372	0							
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure				3,432	0							

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?					
								Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure				24,533	0							
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure				20,759	0							
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				16,985	0							
SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure				4,218	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure				6,398	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure				5,414	0							
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure				4,429	0							
SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure				1,100	0							
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				3,506	0							

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?					
								Y1	Y2	Y3	Y4	Y5	Y6
Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0							
Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure				13,180	0							
Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure				2,635	0							
SSL Certificate	Infrastructure				845	0							
Internet Access	Infrastructure				180	0							
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure		ANN		415	0							
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure		ANN		930	0							
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure		ANN		2,395	0							
Database SQL Maint Server	Infrastructure		ANN		834	0							
Database SQL Server Physical	Infrastructure		ANN		19,158	0							
DB Maintenance (Annual Cycle $610)	Infrastructure		ANN		610	0							
DB Maintenance (Semi-Annual Cycle $1220)	Infrastructure		ANN		1,220	0							
DB Maintenance (Semi-Annual Cycle $2440)	Infrastructure		ANN		2,440	0							
Dedicated Virtual Server	Infrastructure		ANN		4,150	0							
DB Instance Setup	Infrastructure				976	0							
DBA MS SQL Database Creation on Exisitng Instance	Infrastructure				366	0							
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure		ANN			0							

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

								Affects Project ROI?					
Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure		ANN			0							
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure		ANN			0							
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure		ANN			0							
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure		ANN			0							

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
IT Hours - New Development	Development Svcs	165,000.00					
IT Hours - System Maintenance	Development Svcs		8,250.00				
IT Hours - Customer Support	Development Svcs		8,250.00				
IT Hours - Planned Maintenance	Development Svcs		8,250.00				
User Hours - New Development	Development Svcs						
User Hours - PTNE/OT	Development Svcs						
Contractor Professional Services	Development Svcs						
PC System - Acquisition	Hardware						
PC System - Maintenance	Hardware						
Notebook - Acquisition	Hardware						
Notebook - Maintenance	Hardware						
Tablet Notebook - Acquisition	Hardware						
Tablet Notebook - Maintenance	Hardware						
Laserprinter - Acquisition	Hardware						
Laserprinter - Maintenance	Hardware						
Image Workstations - Acquisition	Hardware						
Image Workstations - Maintenance	Hardware						
PC Maintenance User Owned	Hardware						
Printer Maintenance User Owned	Hardware						
File Space (100GB)	Hardware						
Internet Bandwidth per MB	Hardware						
Package Software - Acquisition	Software						
Package Software - Maintenance	Software						
Business Objects Access	Software						
Term Emulation SFTW-Acquisition	Software						
Term Emulation SFTW-Maintenance	Software						
Server - Acquisition/Upgrade	Infrastructure						
Server - Maintenance	Infrastructure						
Server Sftwre - Acquisition/Upgrade	Infrastructure						
Server Sftwre - Maintenance	Infrastructure						
Server Rack Mount	Infrastructure						
Oracle Enterprise Per Processor - Includes Year 1 Maintenance	Infrastructure						
Oracle Enterprise Per Processor - Year 2 and Beyond	Infrastructure						

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure						
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019	Infrastructure						
SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond	Infrastructure						
Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure						
Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance	Infrastructure						
Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond	Infrastructure						
SSL Certificate	Infrastructure						
Internet Access	Infrastructure						
App Code Directories on Consolidated IIS Server (Virtual)	Infrastructure						
Database (5 GB) on Consolidated SQL Instance Server	Infrastructure						
Database Instance (125 GB DB) on Consolidated SQL Server	Infrastructure						
Database SQL Maint Server	Infrastructure						
Database SQL Server Physical	Infrastructure						
DB Maintenance (Annual Cycle $610)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $1220)	Infrastructure						
DB Maintenance (Semi-Annual Cycle $2440)	Infrastructure						
Dedicated Virtual Server	Infrastructure						
DB Instance Setup	Infrastructure						
DBA MS SQL Database Creation on Exisitng Instance	Infrastructure						
Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $601 On Premise Physical Server = N/A	Infrastructure						

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $951 On Premise Physical Server = $9,288	Infrastructure						
Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $1,702 On Premise Physical Server = $9,751	Infrastructure						
Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $3,167 On Premise Physical Server = $10,446	Infrastructure						
Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = $7,564 On Premise Physical Server = $12,906	Infrastructure						

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development	165,000						165,000
IT Hours - System Maintenance		8,250					8,250
IT Hours - Customer Support		8,250					8,250
IT Hours - Planned Maintenance		8,250					8,250
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	*165,000*	*24,750*					*189,750*
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
Infrastructure Subtotal:							
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	**165,000**	**24,750**					**189,750**

Oakland County -- CAMS Enterprise Enhancements 2019-20

Return on Investment Analysis

Assumptions

Date	Assumption Description
31-Jan-18	Assumes enhancements specific savings will be identified when functionality of new releases are published by Azteca
31-Jan-18	Assumes CAMS User Group will determine priority of enhancements to be implemented