Oakland County
Department of Information Technology
Project Scope and Approach

Emergency Management Security Network – Phase 1 **Project ID: D52110SN**

Leadership Group: Finance/Admin			
Department: Emergency Management		**Division:** Emergency Management	
Project Sponsor: Thom Hardesty	**Date Requested:** 02/15/22	**PM Customer No.** 110	
Request Type: New Development			
IT Team Name: Public and Environmental Services		**IT Team No:** 5	
Project Manager/Leader: Stu Smith			
Account Number: 95011	**Account Description:** Emergency Management	**Customer Name:**	Emergency Management
Grant Funded? **Yes** **No XX**		**Mandate?** **Yes** **No XX** **Mandate Source:**	

Project Goal

To implement an infrastructure improvement project that will update the Building Safety network so that it will be migrated to the IT network.

Business Objective

The main business objective of the Emergency Management Security Network project is to provide the Homeland Security/Emergency Management Department connectivity that is tied to the Information Technology Department network to ensure reliable access in case of an emergency situation.

Major Deliverables

- Detailed Project Plan
- Implementation Plan
- Application and/or System Requirements
- Technical Architecture Diagram(s)
- User Acceptance Test Plan
- Disaster Recovery Toolkit
- Service Level Agreement
- Service Center Knowledge Documents
- Training/User Manuals

Approach

- Develop Detailed Project Plan
- Document system requirements
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- Order hardware and software if needed
- Develop Implementation Plan

- Develop new system
- Develop User Acceptance Test Plan
- Test new system
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train users on new system
- Release new system into production

Research & Analysis

Research Recommendation

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users	25+
Divisions	Homeland Security/Emergency Management
Leadership Groups	Finance/Admin

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
Sponsor	Thomas Hardesty	As Needed

Business Lead	Rob Seeley	As Needed
Subject Matter Expert	Tracey McGee	As Needed

Facilities

-

Technical

- Interaction between OCIT Network/Telecom Teams and Homeland Security.

Funding

- Information Technology/Grants

Other

Priority TBD

Constraints

Exclusions

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PROJECT PHASE AUTHORIZATION

Phase(s): Project Management, Define Business Requirements, Design System Architecture, and Develop Application	
Total Estimated Application Services **Hours: 1,262**	
Total Estimated Technical Systems **Hours: 1,446**	
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: 2,708**	
Preliminary Estimated Development for Future Phases	**Hours:**	
Grand Total Estimated Development	**Hours: 2,708**	**Cost: $446,820**

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PROJECT COMPLETION AUTHORIZATION

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

Emergency Management Security Network – Size Estimate (+/- 10% to 50%)

	Type	ID	Task Name	Estimated Hours
1	Phase	000000	PROJECT MANAGEMENT	545
2	Phase	200000	DEFINE BUSINESS REQUIREMENTS	814
3	Phase	300000	DESIGN SYSTEM ARCHITECTURE	572
4	Phase	500000	DEVELOP APPLICATION	777
5	Phase	600000	IMPLEMENTATION PHASE	
6	Phase	800000	POST IMPLEMENTATION SUPPORT	
7				
1				2,708

Oakland County -- Emergency Management Security Network

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:	0	0	0	0	0	0	0
Costs:							
Development Services Subtotal:	446,820	470,022	13,200	16,500	13,200	16,500	976,242
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal	277,625	34,625	34,625	34,625	34,625	34,625	450,750
Training Subtotal:	0	0	0	0	0	0	0
Other Subtotal:	0	0	0	0	0	0	0
Annual Statistics:							
Annual Total Savings	0	0	0	0	0	0	0
Annual Total Costs	724,445	504,647	47,825	51,125	47,825	51,125	1,426,992
Annual Return on Investment	(724,445)	(504,647)	(47,825)	(51,125)	(47,825)	(51,125)	(1,426,992)
Annual Costs/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Project Cumulative Statistics:							
Cumulative Total Savings	0	0	0	0	0	0	0
Cumulative Total Costs	724,445	1,229,092	1,276,917	1,328,042	1,375,867	1,426,992	1,426,992
Cumulative Return on Investment	(724,445)	(1,229,092)	(1,276,917)	(1,328,042)	(1,375,867)	(1,426,992)	(1,426,992)
Cumulative Cost/Savings Ratio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Year Positive Payback Achieved							NO PAYBACK
State or Federal Mandate?							
Signatures:							
Benefits Reviewed By Project Sponsor				Date:			
Costs (including IT Resources) Reviewed By Information Technology Project Manager				Date:			

Oakland County -- Emergency Management Security Network

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
Reallocation of time management spent on working around the inefficiencies of the current system to other duties.	Intangible Benefit		ANN			0	
Integration of information sharing and resource request processing between the EOC and emergency responders in the field	Intangible Benefit					0	
Ensuring the availability of multiple redundant communications systems	Intangible Benefit					0	
Improved security, availibility, and redundancy of critical systems.	Intangible Benefit					0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	
						0	

Oakland County -- Emergency Management Security Network

Return on Investment Analysis

Savings Detail

Benefit/Savings Description	Project Savings Category	Affects Project ROI? Y1	Y2	Y3	Y4	Y5	Y6	Potential Savings Extensions Y1	Y2	Y3	Y4	Y5	Y6
Reallocation of time management spent on working around the inefficiencies of the current system to other duties.	Intangible Benefit												
Integration of information sharing and resource request processing between the EOC and emergency responders in the field	Intangible Benefit												
Ensuring the availability of multiple redundant communications systems	Intangible Benefit												
Improved security, availibility, and redundancy of critical systems.	Intangible Benefit												

Oakland County -- Emergency Management Security Network

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:								
	Cost Avoidance Subtotal:							
Intangible Benefit:								
	Reallocation of time management spent on working around the inefficiencies of the current system to other duties.							
	Integration of information sharing and resource request processing between the EOC and emergency responders in the field							
	Ensuring the availability of multiple redundant communications systems							
	Improved security, availibility, and redundancy of critical systems.							
Savings Total:								

Oakland County -- Emergency Management Security Network

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			5,416	165	893,640	1.015	x	x				
IT Hours - System Maintenance	Development Svcs			40	165	6,600			x	x	x	x	x
IT Hours - Customer Support	Development Svcs			40	165	6,600			x	x	x	x	x
IT Hours - Planned Maintenance	Development Svcs			20	165	3,300			x		x		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							
Skyware 1.8 Meter Dish	Hardware				4,659	0							
10 Watt Power Inserter	Hardware				475	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				240	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 -- Emergency Management Security Network

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							
SSL Certificate	Infrastructure		ANN	1	845	845		x	x	x	x	x	x
Internet Access	Infrastructure		ANN	1	180	180		x	x	x	x	x	x
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							

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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
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							
Project Staff Training	Training					0							
User Training	Training					0							
ASE Line cost	Infrastructure		ANN	28	1,200	33,600		x	x	x	x	x	x
PoE Solution	Infrastructure		ANN	1	10,000	10,000		x					
UPS backup PS (Critical Sites Only)	Infrastructure		ANN	10	900	9,000		x					
Network Switch	Infrastructure		ANN	40	5,600	224,000		x					

Oakland County -- Emergency Management Security Network

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	446,820.00	453,522.30				
IT Hours - System Maintenance	Development Svcs		6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
IT Hours - Customer Support	Development Svcs		6,600.00	6,600.00	6,600.00	6,600.00	6,600.00
IT Hours - Planned Maintenance	Development Svcs		3,300.00		3,300.00		3,300.00
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						
Skyware 1.8 Meter Dish	Hardware						
10 Watt Power Inserter	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						

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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						
SSL Certificate	Infrastructure	845.00	845.00	845.00	845.00	845.00	845.00
Internet Access	Infrastructure	180.00	180.00	180.00	180.00	180.00	180.00
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						

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Cost Detail

Cost Description	Project Cost Category	Potential Cost Extensions					
		Y1	Y2	Y3	Y4	Y5	Y6
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						
Project Staff Training	Training						
User Training	Training						
ASE Line cost	Infrastructure	33,600.00	33,600.00	33,600.00	33,600.00	33,600.00	33,600.00
PoE Solution	Infrastructure	10,000.00					
UPS backup PS (Critical Sites Only)	Infrastructure	9,000.00					
Network Switch	Infrastructure	224,000.00					

Oakland County -- Emergency Management Security Network

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	446,820	453,522					900,342
	IT Hours - System Maintenance		6,600	6,600	6,600	6,600	6,600	33,000
	IT Hours - Customer Support		6,600	6,600	6,600	6,600	6,600	33,000
	IT Hours - Planned Maintenance		3,300		3,300		3,300	9,900
	User Hours - New Development							
	User Hours - PTNE/OT							
	Contractor Professional Services							
	Development Services Subtotal:	***446,820***	***470,022***	***13,200***	***16,500***	***13,200***	***16,500***	***976,242***
Hardware:								
	Skyware 1.8 Meter Dish							
	10 Watt Power Inserter							
	Hardware Subtotal:							
Software:								
	Package Software - Maintenance							
	Software Subtotal:							
Infrastructure:								
	SSL Certificate	845	845	845	845	845	845	5,070
	Internet Access	180	180	180	180	180	180	1,080
	ASE Line cost	33,600	33,600	33,600	33,600	33,600	33,600	201,600
	PoE Solution	10,000	0	0	0	0	0	10,000
	UPS backup PS (Critical Sites Only)	9,000	0	0	0	0	0	9,000
	Network Switch	224,000	0	0	0	0	0	224,000
	Infrastructure Subtotal	***277,625***	***34,625***	***34,625***	***34,625***	***34,625***	***34,625***	***450,750***
Training:								
	Training Subtotal:							
Other:								
	Other Subtotal:							
Costs Total:		***724,445***	***504,647***	***47,825***	***51,125***	***47,825***	***51,125***	***1,426,992***

Oakland County -- Emergency Management Security Network

Return on Investment Analysis

Assumptions

Date	Assumption Description
29-May-22	Traffic and Bandwidth analysis
29-May-22	IPAM/DNS naming
29-May-22	WiFi camera security network will be needed
29-May-22	Need to define the security network (IP Address mgt)
29-May-22	All cameras will be higher resolution than previous (more bandwidth)
29-May-22	POE solution needed
29-May-22	UPS devices may need replacement on critical site (assuming 10)
09-Jun-22	Possibly replace 40 switches