Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

Leadership	Group: Lan	d					
Departmen	t: Treasurer				Division: Genera	al Accounting	
Project Spe	onsor: Jody I	DeFoe	Date Requ	iested:	3/2/2020	PM Custome	er No. 711
Request Ty	rpe:	New Develop	<u>ment</u>		Enhancemen	nt Cus	stomer Support
		Planned Sys	tem Mainter	nance	or Upgrade		
IT Team Na	me: eComm	erce			IT Team No: J		
Project Ma	nager/Leade	r: Dawn Clark					
Account Number:	44064	Account Description:	TRE-NE	EW DE	VELOPMENT	Customer Name:	TREASURER
1.000			Mano Mano	late? late Source:	Yes	<u>No</u>	

### **Project Goal**

To simplify the process for taxpayers of Oakland County property to pay their current and delinquent taxes, improve the efficiency of supporting and managing the application, and enable reporting for validation and reconciliation of funds paid with funds received so that taxpayers have a streamlined process for paying tax that is up to marketplace standards, the risk of unintended foreclosures is reduced, and support costs are reduced by having a single application to support.

# **Business Objective**

To implement a system that presents a single point of entry for taxpayers of Oakland County property to pay their current and delinquent taxes, improve the efficiency of application support and managements as well as enable reporting for validation and reconciliation of funds paid with funds received.

#### **Major Deliverables**

- Detailed Project Plan
- Application and/or System Requirements
- End User Hardware and Software Requirements Document
- Technical Design Document
- Technical Architecture Diagram
- Training Plan
- User Acceptance Test Plan
- Implementation Plan
- Training/User Manual(s)
- Application Code

Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents

#### **Approach**

- Develop Detailed Project Plan
- Review current business process and conduct needs assessment with customer, ensuring current manual processes are refined and automated.
- 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

#### **Gartner Research Recommendation**

Research Conducted – Nothing Found.

# **Benefits**

See Return on Investment (ROI) Analysis Document

# **Impact**

Number of Users General Public and 10 staff

**Divisions** Treasurer – Admin

Leadership Groups Land

Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

Risk

**Business Environment** Medium – Project requires some changes to existing business

processes.

**Technical Environment** Low – Proven or previously implemented technologies.

### **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:	<u>Name</u>	<u>Hours per Day</u>
Project Sponsor:	Jody DeFoe	As needed
Chief Tax Administration	Laura Schmitt	As needed
Delinquent Tax Supervisor	Christy Howard	As needed
Cash Accounting	Hazel Wallace	As needed
Cuparicar		

Supervisor

#### **Facilities**

None

#### **Technical**

None

#### **Funding**

• IT

#### Other

• The public will be able to pay for current & delinquent real & personal property taxes via a single application.

Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

# **Priority**

• TBD

# **Constraints**

None

# **Exclusions**

None

Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

#### PROJECT PHASE AUTHORIZATION

Phase(s): All		
Total Estimated Application Services	Hours: 1907	
Total Estimated Technical Systems	Hours: 237	
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:

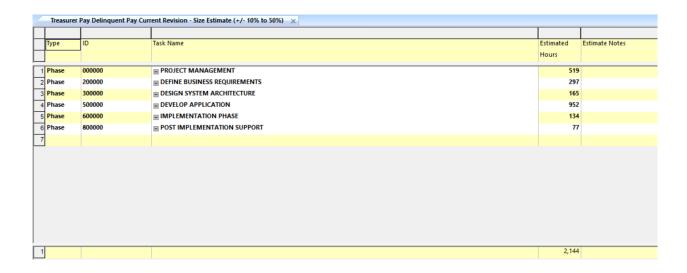
#### PROJECT SUMMARY

Authorized Development (see above)	Hours:			
Preliminary Estimated Development for Future Phases	Hours:			
Grand Total Estimated Development	Hours:	2,144	Cost: \$353,760	

Project Name: Treasurer Pay Delinquent Pay Current Revision Project ID: DJ0711TR

#### PROJECT COMPLETION AUTHORIZATION

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



Return on Investment Analysis

### **Project Summary**

0 249,125 353,760 0 0 25,000	0 249,616 19,998 0	250,112 20,198	0 250,614 20,400	0 251,120 20,604	0 251,631	0 1,502,218
249,125 353,760 0	249,616 19,998 0	250,112	250,614	251,120	·	•
353,760 0 0	19,998	20,198			·	1,502,218
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U	0	-	0	0	0	0
25,000		0	0	0	0	0
,	25,250	25,503	25,758	26,015	26,275	153,800
0	0	0	0	0	0	0
0	0	0	0	0	0	0
249,125	249,616	250,112	250,614	251,120	251,631	1,502,218
378,760	45,248	45,700	46,157	46,619	47,085	609,570
(129.635)	204.368	204.412	204,456	204.501	204.546	892,647
152.04%	18.13%	18.27%	18.42%	18.56%	18.71%	302,0
249,125	498,741	748,854	999,467	1,250,587	1,502,218	1,502,218
378,760	424,008	469,708	515,866	562,485	609,570	609,570
(129.635)	74.733	279.145	483.601	688.102	892.647	892,647
152.04%	85.02%	62.72%	51.61%	44.98%	40.58%	40.58%
	Year 2					Year 2
	10012					Tour 2
			Date:			
			Date:			
	249,125 378,760 (129,635) 152.04% 249,125 378,760 (129,635)	249,125 249,616 378,760 45,248 (129,635) 204,368 152.04% 18.13% 249,125 498,741 378,760 424,008 (129,635) 74,733	249,125     249,616     250,112       378,760     45,248     45,700       (129,635)     204,368     204,412       152.04%     18.13%     18.27%       249,125     498,741     748,854       378,760     424,008     469,708       (129,635)     74,733     279,145       152.04%     85.02%     62.72%	249,125	249,125	249,125       249,616       250,112       250,614       251,120       251,631         378,760       45,248       45,700       46,157       46,619       47,085         (129,635)       204,368       204,412       204,456       204,501       204,546         152.04%       18.13%       18.27%       18.42%       18.56%       18.71%         249,125       498,741       748,854       999,467       1,250,587       1,502,218         378,760       424,008       469,708       515,866       562,485       609,570         (129,635)       74,733       279,145       483,601       688,102       892,647         152.04%       85.02%       62.72%       51.61%       44.98%       40.58%         Date:

Return on Investment Analysis

#### Savings Detail

	Project Savings		Unit		Rate per		Annual
Benefit/Savings Description	Category	Budget Category/Funding Source	Desc	Units	Unit	Total Savings	Multiplier
Reduce the risk of unitended tax							
foreclosures	Cost Avoidance		EA	1	200,000	200,000	1.000
Reduced IT support costs	Cost Avoidance		HR	225	165	37,125	1.010
Delinquent Tax Staff time savings	Cost Avoidance		HR	240	50	12,000	1.010
One streamlined online source for							
taxpayers to pay current and deliquent							
taxes	Intangible Benefit					0	
Reducing confusion by taxpayers	Intangible Benefit					0	
Better reporting and reconcilation for	-						
funds paid with funds received	Intangible Benefit					0	
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Return on Investment Analysis

#### Savings Detail

		A	ffect	s P	roje	ct R	OI?		Po	tential Saving	gs Extensions		
Banafit/Sayinga Dagarintian	Project Savings	V	Va	Va		VE	Ve	Y1	Va	Y3	VA	VE	Y6
Benefit/Savings Description	Category	11	Y2	ļΤJ	14	1 7	10	Y 1	Y2	13	Y4	Y5	10
Reduce the risk of unitended tax			ļ.,	Ĺ		į,							
foreclosures	Cost Avoidance	X X X	X X X	ļΧ	¦X	ļΧ	¦X	200,000.00	200,000.00	200,000.00	200,000.00	200,000.00	200,000
Reduced IT support costs	Cost Avoidance	IX.	ļΧ	X	IX.	ļΧ	IX.	37,125.00	37,496.25	37,871.21	38,249.92	38,632.42	39,019
Delinquent Tax Staff time savings	Cost Avoidance	X	ļΧ	Х	X	ļΧ	X	12,000.00	12,120.00	12,241.20	12,363.61	12,487.25	12,612
One streamlined online source for										ļ	į		
taxpayers to pay current and deliquent			İ	İ		1				į	į		
taxes	Intangible Benefit		į.	į		1							
Reducing confusion by taxpayers	Intangible Benefit		1	l			-			i ! !	i !		
Better reporting and reconcilation for			1		1		-						
funds paid with funds received	Intangible Benefit												
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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:							
Reduce the risk of unitended tax							
foreclosures	200,000	200,000	200,000	200,000	200,000	200,000	1,200,000
Reduced IT support costs	37,125	37,496	37,871	38,250	38,632	39,019	228,394
Delinquent Tax Staff time savings	12,000	12,120	12,241	12,364	12,487	12,612	73,824
Cost Avoidance Subtotal:	249,125	249,616	250,112	250,614	251,120	251,631	1,502,218
Intangible Benefit:							
One streamlined online source for taxpayers							
to pay current and deliquent taxes							
Reducing confusion by taxpayers							
Better reporting and reconcilation for funds paid with funds received							
Savings Total:	249,125	249,616	250,112	250,614	251,120	251,631	1,502,218

Return on Investment Analysis

#### Cost Detail

								Af	ect	s Pr	ojec	t RC	) ?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual						
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	<b>Y2</b>	Y3	Y4 '	Y5	Y6
IT Hours - New Development	Development Svcs		HR	2,144	165	353,760		Х					
IT Hours - System Maintenance	Development Svcs			40	165	6,600	1.010		Х	x	х	x	Х
IT Hours - Customer Support	Development Svcs			80	165	13,200	1.010		Х	х	х	х	Х
IT Hours - Planned Maintenance	Development Svcs				165	0							
User Hours - New Development	Development Svcs					0							
User Hours - PTNE/OT	Development Svcs					0							
Contractor Professional Services	Development Svcs					0						, [	
PC System - Acquisition	Hardware				687	0					, ,		
PC System - Maintenance	Hardware				2,936	0							
Notebook - Acquisition	Hardware				1,115	0							
Notebook - Maintenance	Hardware				3,024	0							
Tablet Notebook - Acquisition	Hardware				1,421	0						i	
Tablet Notebook - Maintenance	Hardware				2,800	0						,	
Laserprinter - Acquisition	Hardware				1,432	0							
Laserprinter - Maintenance	Hardware				1,408	0							
PC Maintenance User Owned	Hardware				2,720	0							
Printer Maintenance User Owned	Hardware				1,264	0							
File Space (100GB)	Hardware		ANN		23	0						,	
Package Software - Acquisition	Software					0						.	
Package Software - Maintenance	Software					0							
Business Objects Access	Software					0							
Term Emulation SFTW-Acquisition	Software					0						i 1	
Term Emulation SFTW-Maintenance	Software					0							
AWS Fees	Infrastructure		ANN	1	25,000	25,000	1.010	х	Х	х	х	х	х
Server - Acquisition/Upgrade	Infrastructure				8,000	0							
Server - Maintenance	Infrastructure				360	0							
Server Sftwre - Acquisition/Upgrade	Infrastructure				335	0						i	
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												i	
2 and Beyond	Infrastructure				3,432	0						į	

Return on Investment Analysis

#### Cost Detail

								Aff	ects	s Pro	ject	ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual		- 1			
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4   `	Y5 Y6
SQL Server Enterprise - Per Processor											$\overline{}$	<u> </u>
(4 cores) - Purchased Sept 2016-Aug									İ			
2017 - Includes Maintenance thru Aug												
2019	Infrastructure				24,533	0		li			į	
SQL Server Enterprise - Per Processor												
(4 cores) - Purchased Sept 2017-Aug									İ			
2018 - Includes Maintenance thru Aug											-	
2019	Infrastructure				20,759	0						
SQL Server Enterprise - Per Processor												
(4 cores) - Purchased Sept 2018-Aug								li	i		- 1	
2019 - Includes Maintenance thru Aug									İ			
2019	Infrastructure				16,985	0					- 1	
SQL Server Enterprise - Maintenance,												
Per Processor (4 cores) - Sept 2019								li	į			
and Beyond	Infrastructure				4,218	0		li				
SQL Server Standard - Per Processor												
(4 cores) - Purchased Sept 2016-Aug									ŀ		-	
2017 - Includes Maintenance thru Aug												
2019	Infrastructure				6,398	0		li				
SQL Server Standard - Per Processor								li				
(4 cores) - Purchased Sept 2017-Aug									İ			
2018 - Includes Maintenance thru Aug											-	
2019	Infrastructure				5,414	0						
SQL Server Standard - Per Processor								l				
(4 cores) - Purchased Sept 2018-Aug								li	İ	İ	İ	
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									- 1		-	
Single/Dual Core - Includes Year 1											-	
Maintenance	Infrastructure				3,506	0			į			i

Return on Investment Analysis

#### Cost Detail

								Aff	ect	s Pro	ject	t ROI?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual					
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5 Y6
										$\Box$	$\neg$	
Websphere Basic Per Processor										1 1		
Single/Dual Core - Year 2 and Beyond	Infrastructure				701	0						
Websphere ND Per Processor											- 1	
Single/Dual Core - Includes Year 1												
Maintenance	Infrastructure				13,180	0					_	
Mahanhara ND Day Dragosay												
Websphere ND Per Processor	 				0.005	0						İ
,	Infrastructure				2,635	0					<del></del> i	
SSL Certificate	Infrastructure				845	0				H	i	_ <u>i</u> _
Internet Access	Infrastructure				180	0						
Imperva Web Application Firewall	l		1			_						-
(External Web Applications Only)	Infrastructure		ANN		500	0						
App Code Directories on Consolidated	<b>.</b>		l									ļ
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												Ì
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												İ
\$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						ļ
Extra Small - 2 Core 8GB RAM, 500GB												
Drive, 10 GB NIC - Cloud/Virtual =												
\$601 On Premise Physical Server =												İ
N/A	Infrastructure		ANN			0				1		

# Oakland County -- Treasurer Pay Delinquent Pay Current Revision Return on Investment Analysis

#### Cost Detail

								Af	fect	s Pro	ojec	t RC	1?
	Project Cost	Budget Category/Funding	Unit		Rate per		Annual				- {	ŀ	
Cost Description	Category	Source	Desc	Units	Unit	Total Cost	Multiplier	Y1	Y2	Y3	Y4	Y5	Y6
Small - 4 Core 16GB RAM, 500GB											ŀ	ł	
Drive, 10 GB NIC - Cloud/Virtual =											ļ	ļ	
\$951 On Premise Physical Server =											- 1	ļ	
\$9,288	Infrastructure		ANN			0					i	į	
Medium - 8 Core 32GB RAM, 500GB											į	i	
Drive, 10 GB NIC - Cloud/Virtual =											Ì	İ	
\$1,702 On Premise Physical Server =											i	ļ	
\$9,751	Infrastructure		ANN			0						ļ	
Large - 16 Core 64GB RAM, 500GB												į	
Drive, 10 GB NIC - Cloud/Virtual =											į	į	
\$3,167 On Premise Physical Server =											Ì	İ	
\$10,446	Infrastructure		ANN			0					ŀ	ļ	
Extra Large - 40 Core 160GB RAM,												l	
500GB Drive, 10 GB NIC -											į	į	
Cloud/Virtual = \$7,564 On Premise											į	į	
Physical Server = \$12,906	Infrastructure		ANN			0					į	į	

Return on Investment Analysis

#### Cost Detail

	Potential Cost Extensions								
	Project Cost								
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6		
IT Hours - New Development	Development Svcs	353,760.00							
IT Hours - System Maintenance	Development Svcs		6,666.00	6,732.66	6,799.99	6,867.99	6,936.67		
IT Hours - Customer Support	Development Svcs		13,332.00	13,465.32	13,599.97	13,735.97	13,873.33		
IT Hours - Planned Maintenance	Development Svcs								
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				1				
Tablet Notebook - Maintenance	Hardware								
Laserprinter - Acquisition	Hardware			l	İ				
Laserprinter - Maintenance	Hardware								
PC Maintenance User Owned	Hardware								
Printer Maintenance User Owned	Hardware								
File Space (100GB)	Hardware								
Package Software - Acquisition	Software								
Package Software - Maintenance	Software								
Business Objects Access	Software								
Term Emulation SFTW-Acquisition	Software								
Term Emulation SFTW-Maintenance	Software								
AWS Fees	Infrastructure	25,000.00	25,250.00	25,502.50	25,757.53	26,015.10	26,275.25		
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								

Return on Investment Analysis

#### Cost Detail

	Potential Cost Extensions					1	
	Project Cost						
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6
SQL Server Enterprise - Per Processor			!	-		}	
(4 cores) - Purchased Sept 2016-Aug							
2017 - Includes Maintenance thru Aug						}	
2019	Infrastructure			İ			
SQL Server Enterprise - Per Processor				İ			
(4 cores) - Purchased Sept 2017-Aug							
2018 - Includes Maintenance thru Aug							
2019	Infrastructure					ļ	
SQL Server Enterprise - Per Processor				!			
(4 cores) - Purchased Sept 2018-Aug							
2019 - Includes Maintenance thru Aug						İ	
2019	Infrastructure			İ			
SQL Server Enterprise - Maintenance,				-	 		! !
Per Processor (4 cores) - Sept 2019				ļ		!	
and Beyond	Infrastructure						
SQL Server Standard - Per Processor				1			
(4 cores) - Purchased Sept 2016-Aug				İ		İ	
2017 - Includes Maintenance thru Aug				-		•	
2019	Infrastructure					ļ	
SQL Server Standard - Per Processor							
(4 cores) - Purchased Sept 2017-Aug							
2018 - Includes Maintenance thru Aug				İ		ļ	
2019	Infrastructure						İ
SQL Server Standard - Per Processor							
(4 cores) - Purchased Sept 2018-Aug							
2019 - Includes Maintenance thru Aug							
2019	Infrastructure		İ	İ	i	ļ	
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					}	

Return on Investment Analysis

#### Cost Detail

		Potential Cost Extensions								
	Project Cost		}			}	!			
Cost Description	Category	Y1	Y2	Y3	Y4	Y5	Y6			
			-	!	!	!	!			
Websphere Basic Per Processor			İ	İ	İ	ļ	ļ			
Single/Dual Core - Year 2 and Beyond	Infrastructure		-			<u> </u>	ļ			
Websphere ND Per Processor				İ						
Single/Dual Core - Includes Year 1			•		İ		ļ			
Maintenance	Infrastructure			<u> </u>	<u> </u>	<u> </u>				
			İ	İ	İ	İ	ļ			
Websphere ND Per Processor	l f		İ			ļ				
	Infrastructure									
SSL Certificate	Infrastructure		<u>i</u>	<u> </u>	ļ	<u> </u>	<u> </u>			
Internet Access	Infrastructure		į	<u> </u>			i I			
Imperva Web Application Firewall				İ	İ	İ				
(External Web Applications Only)	Infrastructure		 	<u> </u>		 	i ! !			
App Code Directories on Consolidated			ļ	-	!	ļ	ļ			
IIS Server (Virtual)	Infrastructure		ļ	<u> </u>						
Database (5 GB) on Consolidated SQL			İ				-			
Instance Server	Infrastructure		į	<u> </u>			İ			
Database Instance (125 GB DB) on			}			•				
Consolidated SQL Server	Infrastructure		<u> </u>	1		!	ļ			
Database SQL Maint Server	Infrastructure			<u> </u>			ļ			
Database SQL Server Physical	Infrastructure			!						
DB Maintenance (Annual Cycle \$610)	Infrastructure		<u> </u>							
DB Maintenance (Semi-Annual Cycle			Ì		İ					
\$1220)	Infrastructure									
DB Maintenance (Semi-Annual Cycle			-			}	-			
\$2440)	Infrastructure		1	<u> </u>			ļ			
Dedicated Virtual Server	Infrastructure									
DB Instance Setup	Infrastructure									
DBA MS SQL Database Creation on			1		İ	İ				
Exisitng Instance	Infrastructure			<u> </u>			i !			
Extra Small - 2 Core 8GB RAM, 500GB										
Drive, 10 GB NIC - Cloud/Virtual =			-		<u> </u>	}				
\$601 On Premise Physical Server =			-			!				
N/A	Infrastructure		<u> </u>			<u> </u>	<u> </u>			

Return on Investment Analysis

#### Cost Detail

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

# Oakland County -- Treasurer Pay Delinquent Pay Current Revision 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	353,760						353,760
IT Hours - System Maintenance		6,666	6,733	6,800	6,868	6,937	34,003
IT Hours - Customer Support		13,332	13,465	13,600	13,736	13,873	68,007
IT Hours - Planned Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
Contractor Professional Services							
Development Services Subtotal:	353,760	19,998	20,198	20,400	20,604	20,810	455,770
Hardware:							
Hardware Subtotal:							
Software:							
Software Subtotal:							
Infrastructure:							
AWS Fees	25,000	25,250	25,503	25,758	26,015	26,275	153,800
International Outstates	25.000	05.050	05.500	05 750	22.245	00.075	450.000
Infrastructure Subtotal	25,000	25,250	25,503	25,758	26,015	26,275	153,800
Training:							
Training Subtotal:							
Other:							
Other Subtotal:							
Costs Total:	378,760	45,248	45,700	46,157	46,619	47,085	609,570

# Oakland County -- Treasurer Pay Delinquent Pay Current Revision Return on Investment Analysis

Date: 07/17/2020

#### Assumptions

Date	Assumption Description
05-Mar-20	Reduce the risk of unintended tax foreclosures - based on the possibility of one inadvertent foreclosure per year.
05-Mar-20	Reduced IT support costs - Approximately 25-hours annually in support and 2100-hours per annually on problem ticket
05-Mar-20	Delinquent Tax Staff time savings - Based on 20-hours per month in savings
	Assumes AWS S3 Serverless environment or reuse of the existing servers; no new HW
18-Jun-20	Assumes changes to application will be make in such a way as not require vendor services from BS&A

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