

Oakland County Department of Information Technology Project Scope and Approach

Project Name: Critical Services Network Split

Project ID: TP7186CS

Leadership Group: Information Technology Steering Committee				
Department: Information Technology			Division: Technical Systems and Networking	
Project Sponsor: David Veit		Date Requested: 07/03/07		PM Customer No. 186
Request Type: <input checked="" type="checkbox"/> New Development <input type="checkbox"/> Enhancement <input type="checkbox"/> Customer Support <input type="checkbox"/> Planned System Maintenance or Upgrade				
IT Team Name: Network Services			IT Team No: P	
Project Manager/Leader: David Bates				
Account Number: 17030		Account Description: Technical Systems and Networking		Customer Name: Information Technology
Grant Funded? Yes <input checked="" type="checkbox"/> No		Mandate? Yes <input checked="" type="checkbox"/> No		
Mandate Source:				

Project Goal

To build a physically separate critical services network environment that is governed by a rigid change management process, so that the risk of service interruptions is reduced to critical Public Safety voice services.

Business Objective

To perform project management activities, so that project execution is timely with appropriate quality and cost controls.

Major Deliverables

- Updated Project Plan
- Project Issues Log
- Project Scope Management Log

Approach

To utilize Technical Systems and Networking staff to perform the following activities:

- Develop Initial Project Documents, and
- Develop and Maintain Project Data.

IT management will provide expertise and approval of project documentation requiring management approval.

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Business Objective

Improve network reliability for digital wireless and next generation 911 voice services by building a network backbone that is isolated from current OAKNet Intranet Services network backbone, along with implementing stringent change management tools, policies and/or processes.

Major Deliverables

- Acquired fiber for the critical services network backbone
- Post installation fiber inspection and transition from McLeod USA executed
- Network design developed
- Network components procured
- Network core components installed
- Network core components and design tested
- Network edge components pilot site installed
- Pilot site tested
- Remaining network edge components installed
- Remaining 25 (of 26) PSAP facilities cut-over to the critical services network backbone
- Network auditing tool to support change management audit selected
- Network auditing tool procured
- Network auditing tool implemented
- Rigid change management policies and/or processes developed and implemented

Approach

To utilize internal Technical Systems and Networking staff supplemented by contracted services to perform the following activities:

- Select provider,
- Inspect fiber installation,
- Develop network design,
- Procure network components,
- Install network components,
- Test network components, design, and pilot site,
- Coordinate cut-over of PSAP facilities with M/A COM and AWT,
- Select and implement a network auditing tool,
- Develop and implement a rigid change management policy and/or process, and
- Develop and maintain project data.

To engage McLeod USA to perform the following activities:

- Install fiber,
- Perform fiber testing, and
- Perform fiber infrastructure transition.

To utilize M/A COM and AWT to perform the following activities:

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- Execute any equipment and software changes necessary,
- Coordinate cut-over with PSAP sites, and
- Provide onsite support during the cut-over.

IT management will provide expertise and approval of plans and project documentation requiring management approval as needed.

Benefits

See Return on Investment (ROI) Analysis Document

Intangible

Improved Service

- Reduce service interruption risks to critical Public Safety voice services by physically separating the networks into environments that fit the deployment requirements: A dynamic flexible OAKNet Intranet Services environment (current), and A static OAKNet Critical Services environment (new).
- Reduce service interruption risks services by using a dedicated design to significantly reduce the complexity of the environment that will provide critical Public Safety voice services.
- Reduce service interruptions by physically separating Intranet traffic that can produce denial of services attacks originating from any current Customer connected to the OAKNet Intranet Services environment including: Cities, Villages, Townships, and County internal networks.
- Reduce service interruptions by physically separating Intranet traffic that can produce Worm, Virus, and Trogon attacks originating from any current Customer in a six County region connected to the OAKNet Intranet Services environment including: Cities, Villages, Townships, and Counties internal networks.
- Reduce service interruption risks to critical Public Safety voice services by implementing strictly enforced change management policies, tools, and/or processes on the new OAKNet Critical Services network.

Product/Service Accuracy

- None identified

Product/Service Productivity

- Improved network performance by creating an isolated network backbone with only digital wireless and next generation 911 services equipment and users.

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Impact

Number of Users All law enforcement, 911 operators, and Oakland County citizens that use the next generation 911 services.

Divisions CLEMIS

Leadership Groups Information Technology, CLEMIS

Risk

Business Environment Low - Little or no impact 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:

<u>Role:</u>	<u>Name</u>	<u>Hours per Day</u>
Project Sponsor:	David Veit	As needed.

Facilities

- No additional networking rooms, closets, or buildings are required.

Technical

- Required: Dedicated fiber, dedicated redundant network components (dual power, dual supervisor modules)
- Existing cabinets where other core switches sufficient.
- Migration will be core build-out and test, then a pilot site, then one-by-one site migration.
- Network auditing tool to support change management audit required.
- See attached diagram for a list of sites, along with the number and distance of the fiber

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runs.

Funding

- IT

Other

- OAKNet Critical Services = digital wireless services, next generation 911 services (these services are collocated at the same PSAP facilities).
- OAKNet Intranet Services = all currently deployed data, voice, and video services.
- No RFP for equipment. Specify equipment based on vendor compatibility and cut purchase orders (will follow bid processes for best prices).
- McCleod USA to pull the fiber.
- Change management policy / process is required to support static environment and any Tariff(s) developed.
- No known delivery time constraints.

Priority To Be Determined

Constraints

- TSN works on network components only (not any of the equipment supplied by M/A Comm or AWT – we will coordinate efforts with them).

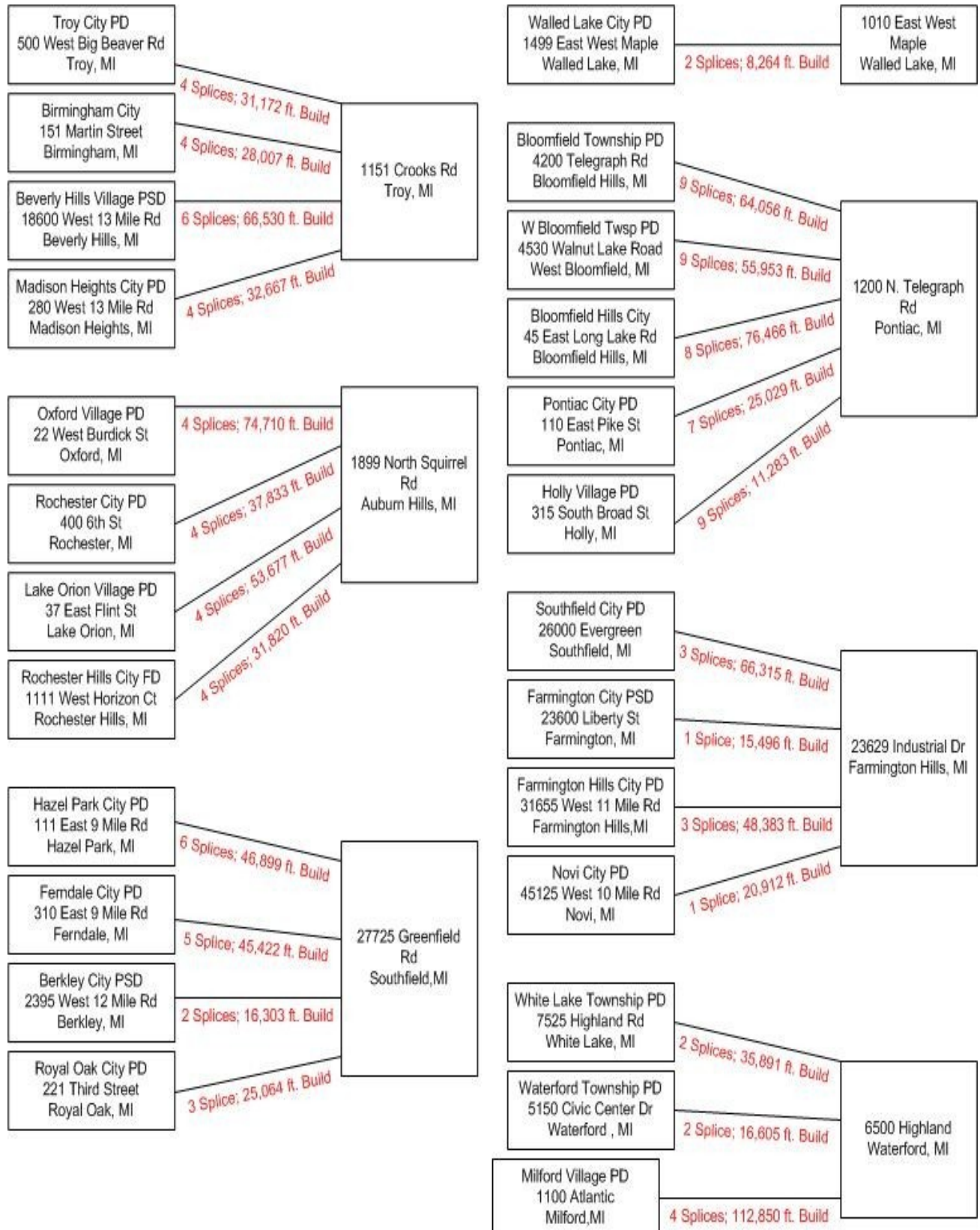
Exclusions

- Any Tariff(s) required will be developed by the NG911 project.

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PROJECT PHASE AUTHORIZATION

Phase(s): All	
Total Estimated Application Services	Hours: Cost:
Total Estimated Technical Systems	Hours: 4,725 Cost: 192,150
Total Estimated eGovernment Services	Hours: Cost:
Total Estimated CLEMIS	Hours: Cost:
Total Estimated Internal Services	Hours: Cost:
IT Application Services Division Manager Approval:	Date:
IT Technical Systems Division Manager Approval:	Date:
IT eGovernment Services 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: 4,725	Cost: 192,150
Preliminary Estimated Development for Future Phases	Hours:	Cost:
Grand Total Estimated Development	Hours: 4,725	Cost: 192,150

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PROJECT COMPLETION AUTHORIZATION

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

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[Critical Services Network Split - Size Estimate (+/- 10% to 50%)]						
Tools Window Help						
[All Resources]						
Type	ID	Task Name	Estimated Hours	Estimated Cost	Estimate Notes	
Phase	000000	PROJECT MANAGEMENT	1,045	\$127,490		
Phase	100000	FIBER INFRASTRUCTURE	232	\$12,200.		
Phase	200000	SOLUTION DEVELOPMENT	850	\$12,200.		
Phase	300000	PRE-IMPLEMENTATION	1,250	\$12,200.		
Phase	400000	IMPLEMENTATION	1,130	\$15,860.		
Phase	500000	POST IMPLEMENTATION	200	\$12,200.		
			4,707	\$192,150.0		

*Note 17.5 hours of actuals through 08/03/07

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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:	343,725	0	0	0	0	0	343,725
Hardware Subtotal:	0	0	0	0	0	0	0
Software Subtotal:	0	0	0	0	0	0	0
Infrastructure Subtotal:	1,215,000	0	0	0	0	0	1,215,000
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	1,558,725	0	0	0	0	0	1,558,725
Annual Return on Investment	(1,558,725)						(1,558,725)
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	1,558,725	1,558,725	1,558,725	1,558,725	1,558,725	1,558,725	1,558,725
Cumulative Return on Investment	(1,558,725)	(1,558,725)	(1,558,725)	(1,558,725)	(1,558,725)	(1,558,725)	(1,558,725)
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: _____						
Costs (including IT Resources) Reviewed By Technical Services Manager	Date: _____						

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Cost Detail

Cost Description	Project Cost Category	Budget Category/Funding Source	Unit Desc	Units	Rate per Unit	Total Cost	Annual Multiplier	Affects Project ROI?						Potential Cost Extensions											
								Y1	Y2	Y3	Y4	Y5	Y6	Y1	Y2	Y3	Y4	Y5	Y6						
IT Hours - New Development	Development Svcs	Technical Systems and Networking / 17030	HR	4,725	41	193,725		x									193,725								
IT Hours - System Maintenance	Development Svcs				122	0																			
User Hours - New Development	Development Svcs					0																			
User Hours - PTNE/OT	Development Svcs					0																			
M/A Comm and AWT Consulting	Development Svcs	Technical Systems and Networking / 17030	EA	1	150,000	150,000		x									150,000								
PC System - Acquisition	Hardware					0																			
PC System - Maintenance	Hardware					2,304	0																		
Notebook - Acquisition	Hardware					0	0																		
Notebook - Maintenance	Hardware					2,372	0																		
Mini Notebook - Acquisition	Hardware					0	0																		
Mini Notebook - Maintenance	Hardware					2,196	0																		
Laserprinter 1 - Acquisition	Hardware					0	0																		
Laserprinter 1 - Maintenance	Hardware					1,104	0																		
Laserprinter 2 - Acquisition	Hardware					0	0																		
Laserprinter 2 - Maintenance	Hardware					1,208	0																		
Laserprinter 3 - Acquisition	Hardware					0	0																		
Laserprinter 3 - Maintenance	Hardware					1,860	0																		
Image Workstations - Acquisition	Hardware					0	0																		
Image Workstations - Maintenance	Hardware					3,496	0																		
Terminals - Acquisition	Hardware					0	0																		
Terminals - Maintenance	Hardware					644	0																		
PRTR w/TERM ID - Acquisition	Hardware					0	0																		
PRTR w/TERM ID - Maintenance	Hardware					1,072	0																		
PRTR w/o TERM ID - Acquisition	Hardware					0	0																		
PRTR w/o TERM ID - Maintenance	Hardware					1,072	0																		
PC Maintenance User Owned	Hardware					2,304	0																		
Printer Maintenance User Owned	Hardware					1,072	0																		
Package Software - Acquisition	Software					0	0																		
Package Software - Maintenance	Software					0	0																		
Business Objects Access	Software					0	0																		
Term Emulation SFTW-Acquisition	Software					0	0																		
Term Emulation SFTW-Maintenance	Software					0	0																		
Server - Acquisition/Upgrade	Infrastructure					0	0																		
Server - Maintenance	Infrastructure					0	0																		
Server Stwre - Acquisition/Upgrade	Infrastructure					0	0																		
Server Stwre - Maintenance	Infrastructure					0	0																		
Fiber Optic Cabling	Infrastructure	Technical Systems and Networking / 17030	EA	1	565,000	565,000		x									565,000								
Networking Equipment	Infrastructure	Technical Systems and Networking / 17030	EA	1	600,000	600,000		x									600,000								
Internal Wiring and Grounding	Infrastructure	Technical Systems and Networking / 17030	EA	1	50,000	50,000		x									50,000								
TBD	Infrastructure					0																			
Internet Access	Infrastructure					180	0																		
Project Staff Training	Training					0	0																		
User Training	Training					0	0																		
						0	0																		
						0	0																		
						0	0																		
						0	0																		

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Cost Summary

Cost Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Development Services:							
IT Hours - New Development	193,725						193,725
IT Hours - System Maintenance							
User Hours - New Development							
User Hours - PTNE/OT							
M/A Comm and AWT Consulting	150,000						150,000
<i>Development Services Subtotal:</i>	343,725						343,725
Hardware:							
<i>Hardware Subtotal:</i>							
Software:							
<i>Software Subtotal:</i>							
Infrastructure:							
Fiber Optic Cabling	565,000						565,000
Networking Equipment	600,000						600,000
Internal Wiring and Grounding	50,000						50,000
<i>Infrastructure Subtotal</i>	1,215,000						1,215,000
Training:							
<i>Training Subtotal:</i>							
Other:							
<i>Other Subtotal:</i>							
Costs Total:	1,558,725						1,558,725

