

# **Hamilton County, Ohio Business Case Report Telecommunications Division**

## **I. PURPOSE**

The purpose of this business case is to identify the suitability of the Hamilton County Telecommunications Division as a candidate for managed competition. In addition, the business case seeks to identify additional efficiency efforts which may be initiated as it relates to the management of County telecommunications operations.

## **II. SCOPE**

### **A. Services that are currently provided**

The County's Telecommunication function is located within the Hamilton County Department of Communications. The Communications Department is responsible for the Telecommunications Division and for the Public Safety Division that includes the consolidated Enhanced 9-1-1 center that serves the emergency communications needs of over 105 police, fire and EMS agencies in 45 jurisdictions within Hamilton County. For this business case the focus will be on the Telecommunications Division that provides installation, maintenance, support services and management for all County telecommunications hardware, software, network trunking, and voice/data cabling infrastructure.

Telecommunications provides both voice and data networking services to 43 Hamilton County Departments located throughout 46 buildings. They manage and support in excess of 6,400 telephone connections with an additional 5,000 plus voice mailboxes, all residing on Avaya telecommunications hardware. All hardware and software is owned and maintained by the county. The hardware consists of three voice mail systems, 13 PBX (Private Branch Exchange) Systems, 4 remote EPN (Emergency Preparedness Network) cabinets and 9 branch office extenders. All of these systems are linked together using Hamilton County-owned fiber and T1 lines leased from Cincinnati Bell.

### **B. Customer Service Requirements**

The division currently provides a three-day turnaround time on installations and 24-hour turnaround time on repairs. Current statistics show 99.9 % of the time, repair and installation jobs are completed within the three-day target (refer to Attachment G - Customer Services feedback). Requests for telecommunications repairs and emergency services are available 24 hours per day seven days a week.

### C. Other Services

The Telecommunications Division provides continuous system monitoring support and 24/7 emergency service to the County 9-1-1 system. Critical to the receipt and delivery of emergency police, fire, and EMS services in 45 Hamilton County political jurisdictions are the reliability and performance of the 9-1-1-telephone equipment. The Telecommunications Division provides technical and planning support for the countywide enhanced 9-1-1 telephone system infrastructure as follows:

- The Telecommunications Division Manager serves as the County 9-1-1 Coordinator responsible for insuring the availability and reliability of the 9-1-1 system in Hamilton County. This involves oversight and coordination between the county's four Public Safety Answering Points (PSAPs).
- Staff provide both hardware and software support for the Hamilton County Communication Center's 9-1-1 system.
- The Division is overseeing implementation of new technology to support phase II 9-1-1 wireless telephone locations technology. This technology will help to identify the location of an individual calling 9-1-1 from a wireless device.
- The Division evaluated and implemented a new "Next Generation 9-1-1". New emerging wireless telephone technology like (Voice Over Internet Protocol) VOIP and other non-traditional wireless devices are providing new challenges to the 9-1-1 system.
- The Division installed and supports the telephone system at the 9-1-1 back-up center. The Telecommunications Division also supports the telephone equipment at the Communication Center's back-up EOC (Emergency Operations Center) and in the mobile emergency communications vehicle.

*Note: The services provided by this division are not fragmented in nature. There are multiple individuals who are responsible for providing cross-functional services. This allows this unit to operate in a more efficient manner.*

### III. RECOMMENDATIONS

Based on the service review, the following summary recommendations were developed. Please see Section IX for a detailed discussion of each recommendation.

1. The department should establish a formal inventory control process.
2. The department should adopt a formal work order process
3. Formal procedures should be developed for cellular phone service and the function assigned to the Telecommunications Center. The services of a vendor should be employed to help develop procedure and bill-monitoring process.
4. The Department should annually assess the suitability of new technology (e.g. VOIP, etc.) for incorporation within the County.

5. Annually, the department should review the established charge back rate for servicing departments and make all appropriate adjustments.
6. Every five years, management within the Communications Department should revisit the business case process and report the findings to the Assistant County Administrator for Public Services and the County Administrator.
7. County Administration and Communications Department management should develop goals and objectives for staff that include the recommendations and the perpetuation of the business case process.
8. Installation and service of county telephone systems remain in-house.

#### IV. BACKGROUND

##### *History of Telecommunications Division*

In 1990 the Communications Department was approached about adding a Telecommunications Manager position. A Division Manager was appointed and the Telecommunications Division of the Communications Center officially began April 14<sup>th</sup>, 1990.

About one and a half years later a secretarial position was created followed by a Telecom Analyst due to the purchase of the 800 Broadway Building that utilized a PBX (NEC) system which needed to be maintained.

Another year later a cost analysis proved resulted in the creation of two technician positions to perform moves, adds, changes and installs of cable and wiring. The positions resulted in the County no longer having to utilize the telephone company for technician services. Other departments recognized these savings and began employing Telecomm's services within their department. In the mid-90's, the division added another technician and created a supervisory position giving the division a total of three technicians and a working supervisor.

Late in the 1990's a decision was made to transfer the County general information Telephone Operators from the County Facilities department to the Telecommunications Division. There were originally three positions, but the Telecommunications division reduced that number to 2 in an effort to reduce cost in 2004.

The division also added the position of Network Engineer in 1999. This was a result of the County Wide Area Network (WAN) backbone being placed under the Telecommunications Division in 1995.

To date, all county departments and satellite agencies use Telecommunication's wiring services and most use their telephone services to insure that they are receiving compatible and cost effective service and equipment (Refer to Attachment C for a list of the departments and service Telecomm provides).

## *Current State of Telecommunications*

Today the division utilizes the professional services of 10 employees. This staff has the responsibility of managing and completing work related to telephone installation, voicemail management, data wiring, and WAN management. The number of Full Time Equivalents (FTE) assigned to this function as defined within the scope (Section II, Part A) is 4.8 FTE. The combined hourly rate, for comparison purposes, is \$45.10 (Refer to Attachment A and B). The Department contracts out for large wiring projects and other specialized services such as terminating multiple fiber ends and security assessments.

The division does not have an inventory system nor does it have a formal electronic work order system. Because of this, the department does not have a formal method of gauging the accuracy of rates charged back to other county departments for services.

To control rising costs and to minimize needed staffing resources, Telecomm operates under the philosophy of utilizing technology versus personnel. This philosophy is evident in both the voice and data networks. Both have redundant processors in critical components. Reporting programs allow the networks to be monitored by processes rather than personnel. Users will notice no single component failure.

The county's phone service is trunked so costs remain low.

In addition to the above responsibilities, Department employees are also responsible for management of the county customer service call center for the Commissioners' 946-info project and County directory assistance services.

Long distance telephone service is awarded using the competitive bid process. Also the department manages the contract for Inmate Phones for the Sheriff's office which is also bid competitively. The Telecommunications Division handles all front line service on all voice and data equipment. Contract vendors are used as a second tier of support when the department's technicians cannot resolve problems.

Telecommunications employees are on call 24 hours a day 7 days a week for all telephone and data equipment. All individuals on call are salaried employees so overtime is not applicable.

Telecommunications employees are also responsible for the control of e-mail spam and viruses entering the County's network.

## V. OTHER BUSINESS MODELS

### *Private*

#### Great American Financial (GAF)

According to GAF, phones / IP Network are handled in-house. GAF indicated that outsourcing would create issues with response time when communication problems arise.

### University of Cincinnati

According to a UC representative, Bell provides hubs on campus block and service from curb. UCIT (University of Cincinnati Information Technology) department handles phone hardware and wiring on campus. They are an in-house shop but do utilize Bell to some degree. UC and Bell are working together to provide special or innovative services such as wireless voice and data services for students and employees.

### Tri Health

According to Tri Health, the telecomm function is in-house only. No outsourcing is utilized.

### Guardian Savings Bank / Union Savings Bank

According to Guardian Savings, the Migrating Tech Division handles all phones and computer services at all branches. All the work is done in-house.

### Health Alliance

According Mike Kincaid, manager of the Telecomm division, the Health Alliance performs all telecomm functions in-house. They monitor and control their costs through an in-house work order system called eMAC.

### *Public*

The following describes the functionality of other urban county telecommunication departments. Although there are similarities in the services that other telecommunication departments provide, no two provide the exact same set of services. Hamilton County's Telecommunication Division's scope of service extends beyond telephone and data drops. Below is an overview of what other urban counties provide in terms of telecommunications.

### Cuyahoga County, Ohio

Cuyahoga employs over 10,000 individuals. Employees' office phones, cell phones, pagers and high-speed data connections are all managed by their Communications Department. The information systems are managed through controlling all installations and support for all devices and connections. To control costs, competitive bid processing is used for large projects or services outside the scope of the department. Bills are reviewed and compared to prior months. Bill review has been occurring since 1990, and the bid process has been used since 1971. Testing of systems, both data and voice, are checked every two years by an outside consultant. Cuyahoga does not utilize VOIP technology.

### Franklin County, Ohio

One Director, equipped with two technicians, leads the communications department. SBC Ameritek is contracted out for larger jobs. Every three years Franklin bids out their wireless phone service. SBC Centrex System. The voice mail system is owned and managed by the department, but it is connected remotely to the SBC equipment. They have remote access to do some basic changes on SBC's Centrex System, like hunt groups and pick-up groups, but pay \$150.00 per month for this access. Some departments have their own budget that they will spend for telecommunications services and equipment. Franklin County pays about \$30,000 per month just for the SBC charges. Telecommunications is responsible for supporting the needs of the departments under County Commissioners, approximately 20 departments. They

provide limited support for non-board departments. Their scope is primarily telephone service. They will install data cables from the desktop to the closet but do not terminate. Franklin County has about 7 buildings located in downtown Columbus and an additional 14 are outside the city limits.

#### Montgomery County, Ohio

Telecommunications Department is composed of 5 people: Manager, supervisor, operator, billing specialist and technician. They service approximately 4,000 landlines. They are on a Centrex system provided by SBC. The system resides at SBC. SBC manages the system, and performs all patches and upgrades. Larger and/or new jobs that require numerous line drops are bid out to a contractor. They are also having 2<sup>nd</sup> shift electricians assist them with these projects currently. They look at the cost of what it would be for new service in outlying buildings and have found VOIP to be a viable solution. They believe they saved \$17,000 by installing VOIP in their new Sanitation Building

#### Marion County (Indianapolis), Indiana

Voice lines and switches are managed in-house. Phone set up and repair/ replace are contracted out to Avaya and Clawson Communications. Their billing application called Anchor point is utilized to maintain phone records i.e. Equipment, call detail etc. Within Anchor Point, agencies are assigned organization numbers and billing is separated by organization number. They have one manager and three analysts that maintain switch programming for the S8700 and 32 remote switches. Two technicians are contracted from Clawson to install and replace sets. Clawson also provides cabling that is needed at remote sites. The Building Authority handles the cabling in the City County building. They have approximately 8,000 phones. The data network that carries VOIP is maintained by a third party Northrup Grumman.

#### Dade County (Miami), Florida

Dade County has a centralized IT shop. The Field Services Division handles all phones for the majority of the county. They have 20,000 landlines and 80 employees to provide service. Their technicians take care of the whole desktop from network to PC to phones. They bid out services and have utilized a reverse auction for their wireless data service. Bell South, their land line carrier, proposed an unsolicited offer which saved money at the time of renewal. They have implemented VOIP for their 311- information line. Every two years they bring in somebody externally to validate and audit all of their lines.

#### Hamilton County, Ohio

Hamilton County does all telecommunications functions in-house. All installs, designs, repairs and moves are done by County employees. All wiring both data and voice is done in-house with an occasional exception for larger and specialty jobs. Review of monthly billing is accomplished by sending the call listing to the individual departments for review as well as a cursory review by Telecommunications to look for aberrations. Inventory is held on site to minimize the response time for repairs to individual desk sets as well as PBX equipment. The Telecommunications division is responsible for all voice and voice mail systems, wiring for both data and voice, and the backbone of the data network with security from the Internet.

## VI. COMPARABLES

Hamilton County Telecommunications Division developed a survey targeting specific functions they maintain in-house to see how these functions are handled by the counties listed above in section V. Please refer to the results of the survey in Attachment D for a comparison between Hamilton County Telecommunications Division's in-house services and similar urban counties' service delivery models.

## VII. ANALYSIS

A Request for Quotation (RFQ) was placed on the Demandstar system and vendors were given approximately one month to respond. The quote was sent to 536 vendors. Responses were received from 24 vendors (Refer to Attachment E). Two vendors responded with pricing.

Cincinnati Bell Telephone (CBT) supplied their rates over the phone. Due to the multi-tier levels of service, they do not believe they could provide an overall competitive price for service. Prices were provided, individually, for a range of services – most of which are provided by the County's Telecommunications Division. Such services include: enterprise system management, PC installs, adds/moves, repair work, and programming. In addition, costs were provided by CBT for provision of an on-site technician. Costs for the above services ranged from \$75 - \$165/hr depending upon the service. A pure contract cable worker is \$60 - \$65/hr. CBT representatives stated the following. "The rates we gave you were purely time and materials." "This is the rate we give our good customers." "If you contracted out in total we could be more competitive but could not get lower than \$60-\$70 per hour." "Hamilton County Telecom does a good job and we do not think we can compete with their price."

An RFI meeting was held in February 2006. Vendors expressed ideas concerning telecommunications. Some of their thoughts are as follows:

"The greatest financial incentive will be recognized if the county pushes the management of this function to all departments. The economy of scale is only recognized when expenses can be spread across a broad deployment."

"Given the complexity, integration and interoperability of the systems in place, you should consider requiring a vendor to offer the specific in-house expertise. Although it is possible for a vendor to manage a network using a variety of sub-contractors, fused into a single solution, there is danger in receiving service that is disjointed in purpose, direction and quality."

Two vendors presented the idea of reviewing all telephone bills to verify that the county is not paying for vacant lines or hidden taxes. The vendors' proposals assume there will be savings garnered by matching inventory lists of phone equipment and lines and removing vacant lines. These proposals also recommend sharing the savings.

In conclusion, analysis of the data submitted by the two vendors who could provide pricing indicated a significantly higher hourly rate for service than current in-house charges (\$45.10 per

hour - refer to Attachment F). This implications of this analysis correlate strongly with the fact that, of all the comparable entities surveyed, all but one utilize in-house staff for the provision of basic telecommunication service.

## VIII. RECENT EFFICIENCY EFFORTS

The study also yielded cost saving measures that Telecommunications has accomplished to date:

- The division installed fiber optic cable between six of the county owned buildings downtown and extended that to the 630 Main Street building where county employees work in leased space. This fiber optic cable provides the county to provide both data and voice, saving over \$110,000 per year on previous data circuits and allowing the data rate to grow without additional recurring costs.
- The Telecommunications Division handles all front line service on the Voice Equipment and Data Equipment; vendors are used as tier two when the problem cannot be solved by the Telecomm technicians. This saves the county considerable annual maintenance costs. This arrangement has been in place since 1992, making estimating cost savings difficult. At that time with the equipment then in place, the county saved over \$100,000 per year. The county has grown to more than triple the equipment, and rates have gone up, so current savings could be as high as \$300,000 per year.
- The division installed and obtained training to maintain the new 9-1-1 telephone equipment at the County Communications Center, leading to timelier repair work as well as annual maintenance savings of \$6,700.
- The division eliminated data circuits and recurring charges from several locations where it was feasible to utilize wireless point-to-point systems. On one of these installations, both voice and data are provided over the wireless connection.
- In 2006 the Division changed the types of channels that Cincinnati Bell provides to Hamilton County as its trunk service. This change saves Hamilton County \$7,872.30 per month or \$94,467.60 per year. The department shared its discovery with the Job and Family Services Department and the change will result in approximately \$6,000 savings per month and an estimated \$72,000 savings per year.

(Please see Attachment H for Additional Efficiency Efforts)

## IX. DETAILED RECOMMENDATIONS

Based upon initial cost estimates and in consideration of the business model most predominantly employed by the public and private sectors, it is recommended that operation and management of the telecommunications division remain in-house. However, it is also recommended that the

following efficiency practices be implemented as soon as possible – and that the accomplishment of these objectives be tied directly to the annual work and performance goals of responsible staff.

### *1. Telephone Inventory System*

Today the division does not keep an inventory of telephone equipment. This is not done because the phone system is trunked and the county does not pay its bills on a line per line basis. The study recommends that the division develop a policy for inventory and perform an audit on an annual basis. Keeping track of inventory is a good business practice and helps give the residents and the community confidence that the county is appropriately tracking their assets. It is expected that this inventory could be maintained in paper format until such time as it can be migrated to some electronic method. Inventory can be accomplished simply by printing out a list of the stations from each PBX. Total labor time for this activity would be approximately 5 minutes. Taking inventory of the spare phones would give a complete picture of telephone resources. Parts for wiring and jacks are routinely held as inventory and replaced as used.

### *2. Formal Work Order System*

The study has identified that the division does not utilize a formal work order system to track employee hours. As such, the number and type of service calls/repairs are not available. The division is adopting a work order process and hopes to implement a work order system by late 2006. A formal work order system needs to be adopted by the department so that performance data can be tracked more effectively. The current system does not track all hours worked. The division is currently evaluating work order systems to address this problem. There are two potential solutions that are currently under review. One is a system that CAGIS is developing and the second is to use an existing database the department currently owns called QuickBooks Pro. This software is designed for small businesses and allows the set up of several interactive databases that assign cost, and track inventory, work orders and billing. The division currently uses the software to bill long distance charges and services provided to entities that do not receive funding from the General Fund.

### *3. Consolidated Cellular Phone/Data Device policy*

The study yielded a recommendation that cellular telephone operations be consolidated under the Telecommunications Division and the services of an external source be used to help develop policies and procedures and to set up a system for monitoring billings. The county started using cellular phone service quite heavily around 1990. The need for this service has grown and is managed individually by each department. All an individual needs to do is contact the vendor (Cincinnati Bell) and request a phone and set up billing. County Purchasing has been collectively bidding for cellular phone services for the last six years and that has kept costs manageable and below market rates. However, use of this type of telephone service has grown and there are no procedures that dictate who can have a cell phone or a data device so there may be areas where the county has cellular or data services that may not be needed. This is a prime area where the county would benefit from using a vendor to help the county to better manage the function. To date the county has approximately 1,300 cellular phones or data devices. For this reason it is recommended that the function of managing cellular phones and data devices be consolidated under the Telecommunications Division. A vendor could assist with policy development and could implement a system of checks and balances to make sure that the county departments are being charged the appropriate rate and that all possible taxes or surcharges are removed. Once the vendor completes the work, Telecomm would take over the process and perform this function going forward.

#### *4. The utilization of VOIP (Voice over Internet Protocol) technology*

The Telecommunications Division should continually evaluate new technology and implement it in a timely and cost effective manner. In particular the department should monitor Voice over Internet Protocol (VOIP) technology. The division is currently testing the technology as is Job and Family Services. Preliminary results suggest that there is application for this technology in pockets of the county but it is not a system that the county would benefit from implementing across all departments. The rationale for this recommendation is as follows:

- a) VOIP is a technology that allows telephone calls to be made without long distance charges because the calls are made using computers. This technology is of great benefit to companies that are national or international and it provides great savings by reducing long distance costs. However, savings are only realized if both parties subscribe to VOIP. If not, long distance rates are still applicable.
- b) Early studies show that there are multiple problems with varying platforms and in some instances support is taking upwards of two weeks. The studies also show an increase in internal labor hours to manage and implement the process.
- c) Currently the County maintains separate voice and data systems with very small cost for the maintenance of the voice system. With VOIP, if the network is down, so is the phone service.
- d) Most calls over county lines are local and the volume of long distance calls made would not support the increased cost associated with this technology.
- e) The county will begin working on a business case to leverage Information Technology services and that should also help drive common platforms and common software usage which would make VOIP a better solution in the future. Then an analysis will need to be performed to see if VOIP technology has progressed and support response times are at a level that would permit the county to make this change with confidence.

#### *5. Review of Charge Backs*

Each year, the Telecommunications Division should review its methodology for charging County departments for service based upon a refined work order system. Any changes in the cost structure of the division should immediately be reflected in the charges to individual departments.

#### *6. Repeat of Business Case Process*

Due to the nature of this operation, it is recommended that this business case process be repeated every five years in order to comprehensively assess:

- The state of the external private market for providing these services
- Current practices of comparable private and public entities
- The scope of services provided by the Division, along with associated costs, as compared with those documented in the current report
- Suitability of the service for managed competition based upon the above assessment

It is also recommended that should the establishment of a formal work order system result in a cost analysis significantly different than that contained in this report, that the business case process be revisited sooner.

*7. Assignment of Goals and Objectives to Applicable Staff*

In order to continue the County's efforts to push the implementation of efficiency efforts to all levels of the organization, the need for the above recommendations to be formally documented into annual work goals cannot be understated. County Administration should set these expectations with top management of the Communications Department which, in turn, should ensure that tactical implementation is ingrained in the work goals of Telecommunication Division staff.

*8. Installation and maintenance of telephone and data lines*

Based upon the cost comparison of the vendor service providers and the telecommunications trends within the business models (refer to Attachments A, B and F), it is recommended that the installation and maintenance of telephone and data lines not be presented as a candidate for managed competition at this time – but that these services be reviewed in the future according to the schedule detailed in #6 above.

Attachment A

Current Staffing Level and Salary Information

<b>Function</b>	<b>Salary</b>	<b>Benefits</b>	<b>Salary + Benefits</b>	<b>FTE</b>	<b>Hours</b>	<b>Total</b>
<b>Technicians</b>						
Telecomm Analyst	\$68,431	\$20,529	\$88,960	1.00	2,080	\$88,960
Telecomm Specialist Supervisor	\$55,326	\$16,598	\$71,924	1.00	2,080	\$71,924
Telecomm Specialist	\$46,675	\$14,003	\$60,678	.85	1,768	\$51,576
Telecomm Specialist	\$48,632	\$14,590	\$63,222	.63	1,300	\$39,830
<b>Support Staff</b>						
Secretary 2	\$30,154	\$9,046	\$39,200	.75	1,560	\$2,400
Clerical Specialist	\$32,406	\$9,722	\$42,128	.10	208	\$4,213
Telephone Operator	\$28,413	\$8,524	\$36,937	.01	21	\$369
Telephone Operator	\$28,413	\$8,524	\$36,937	.01	21	\$369
<b>Management</b>						
Telecomm Manager	\$83,664	\$25,099	\$108,763	.40	832	\$43,505
Director	\$96,017	\$28,805	\$124,822	.05	104	\$6,241
<b>TOTAL</b>				<b>4.8</b>	<b>9,974</b>	<b>\$336,388</b>
<b>HOURLY RATE (including benefits)</b>						<b>\$33.73</b>

Attachment B

Overhead

<b>Component</b>	<b>Square Footage Cost</b>	<b>Sq Foot Occupied</b>	<b>Total Cost</b>	<b>Comments</b>	<b>Applicable Costs (Total Cost / Total Hours in Attachment A)</b>
Building Costs 800 Broadway (includes utilities ,janitorial service, waste hauling and building repair)	\$6.45	1,652	\$10,655	Figures are based on actual sq. ft. costs as provided to BOMA	\$1.07
Building Costs Civic Center Dr. includes utilities, janitorial service, waste hauling and building repair)	\$9.05	624	\$5,647	Figures are based on actual sq. ft. costs as provided to BOMA	\$0.57
Maintenance agreements only for phone related services	\$0		\$0	Whoever would provide service would have this cost	\$0.00
Maintenance for PBX Cincinnati Bell front line on PBX	\$0		\$0	Whoever would provide service would have this cost	\$0.00
Positron second tier maintenance for 911 call center	\$3,248		\$3,248		\$0.33
Uniforms	\$1,700		\$1,700		\$0.17
Cellular phone bills	\$3,710		\$3,710		\$0.37
Tools	\$1,172		\$1,172		\$0.12
Equipment	\$85,000		\$85,000		\$8.52
Vehicle Maintenance	\$540		\$540		\$0.05
Gasoline	\$1,740		\$1,740		\$0.17
		<b>Total</b>	<b>\$113,412</b>	<b>Total Cost to Be Applied To the Hourly rate</b>	<b>\$11.37</b>

Attachment C - The department's internal customers include the following:

Customer Name	Function Performed	Service Needed
ADAS Highland Ave and the Cinfed Building	Wiring, installation and repair of voice and data	
Appeals Court	Wiring, installation and repair of voice and data	
Auditor	Wiring, installation and repair of voice and data	
BOCC/Admin Svcs/Administration	Wiring, installation and repair of voice and data	
Building Inspections	Wiring, installation and repair of voice and data	
Clerk of Courts	Wiring, installation and repair of voice and data	24 hours
Common Pleas Court	Wiring, installation and repair of voice and data	
Communications Center	Wiring, installation and repair of voice and data	24 hours
Community Development	Wiring, installation and repair of voice and data	
Coroner	Wiring, installation and repair of voice and data	24 hours
Facilities	Wiring, installation and repair of voice and data	24 hours
Court Reporters	Wiring, installation and repair of voice and data	
Domestic Relations	Wiring, installation and repair of voice and data	
Board of Elections	Wiring for voice and data only	
EMA	only for consultation	
Engineer	Wiring, installation and repair of voice and data	24 hours
Environmental Services	Wiring, installation and repair of voice and data	
Family and Children First Council	Wiring, installation and repair of voice and data	
Board of Health	Wiring, installation and repair of voice and data	24 hours
Job and Family Services	Over sight and consultation on future direction	
Jury Commission	Wiring, installation and repair of voice and data	
Mental Health Board	Wiring, installation and repair of voice and data	
MRDD	Wiring for voice and data only	
MSD	Nothing	
Municipal Court	Wiring, installation and repair of voice and data	
Personnel	Wiring, installation and repair of voice and data	
Planning and Zoning	Wiring, installation and repair of voice and data	
Probate Court	Wiring, installation and repair of voice and data	
Probation	Wiring, installation and repair of voice and data	24 hours
Prosecutor	Wiring, installation and repair of voice and data	
Public Defender	Wiring, installation and repair of voice and data	
Public Works	Wiring, installation and repair of voice and data	
Recorder	Wiring, installation and repair of voice and data	
River City Correctional	Wiring, installation and repair of voice and data	24 hours
Sheriff	Wiring, installation and repair of voice and data	24 hours
Soil and Water Conservation	Wiring, installation and repair of voice and data	
TASC	Wiring, installation and repair of voice and data	
Veterans Service Commission	Wiring, installation and repair of voice and data	
Zoning Appeals Board	Wiring, installation and repair of voice and data	
O.S.U. Extension	Wiring, installation and repair of voice and data	
Juvenile	Wiring, installation and repair of voice and data	24 hours
Turning Point Talbert House	Wiring, installation and repair of voice and data	24 hours
Memorial Hall	Wiring, installation and repair of voice and data	
Central Parking at stadium & Parkhaus garage	Wiring, installation and repair of voice and data	24 hours
PBSL	Wiring	24 hours
RCC	Data Wiring	

Attachment D

County Comparables

	<b>Cuyahoga</b>	<b>Franklin</b>	<b>Montgomery</b>	<b>Marion</b>	<b>Dade</b>	<b>Hamilton</b>
<b>Voice Scope</b>						
Installation and Repair of Voice Wiring and Telephones	In-house	In-house	In-house	Out-sourced	In-house	In-house
System Administration (daily moves, adds and changes)	In-house	In-house	In-house	Out-sourced	In-house	In-house
Hardware and software support for the telephone system (trunking, routing and alarm)	In-house	In-house	In-house	In-house	In-house	In-house
Voicemail Administration and hardware support	In-house	In-house	In-house	In-house	In-house	In-house
Call accounting system management	In-house	In-house	In-house	In-house	In-house	In-house
Project management for office installs or reconfigurations	In-house	In-house	Out-sourced	Out-sourced	In-house	In-house
Monitor and manage long distance usage and local trunking and usage	In-house	In-house	In-house	Out-sourced	In-house	In-house
Maintain telecommunication supplies and inventory	In-house	In-house	In-house	Out-sourced	In-house	In-house
Installation of new telephone systems/hardware including headsets, speakerphones and conference units	In-house	In-house	In-house	Out-sourced	In-house	In-house
Design/layout for communication closets and rooms	In-house	In-house	In-house	Out-sourced	In-house	In-house
<b>Data Scope</b>	<b>Cuyahoga</b>	<b>Franklin</b>	<b>Montgomery</b>	<b>Marion</b>	<b>Dade</b>	<b>Hamilton</b>
Project management, design layout, installation, repair, and troubleshooting of data wiring, networks and equipment	In-house	In-house	In-house	Out-sourced	In-house	In-house
Testing and certification for data wiring	In-house	In-house	Out-sourced	Out-sourced	In-house	In-house
Wireless networking installations	n/a	n/a	n/a	n/a	In-house	In-house
Order data circuits	n/a	In-house	In-house	Out-sourced	In-house	In-house
Order and maintain supplies and inventory for data communications	In-house	In-house	In-house	Out-sourced	In-house	In-house
<b>Fiber Optic Scope</b>	<b>Cuyahoga</b>	<b>Franklin</b>	<b>Montgomery</b>	<b>Marion</b>	<b>Dade</b>	<b>Hamilton</b>
Project management, installation, testing, troubleshooting and repair of fiber optic wiring.	n/a	Out-sourced	In-house	n/a	In-house	In-house

Order and maintain supplies and inventory for fiber optic communications	n/a	In-house	In-house	n/a	In-house	In-house
<b>Budget</b>	<b>Cuyahoga</b>	<b>Franklin</b>	<b>Montgomery</b>	<b>Marion</b>	<b>Dade</b>	<b>Hamilton</b>
Phone Lines	9,000	5,000	4,000	8000	20,000	6,400
Full Time Equivalents (FTE).	9	4	6	4	80	4.8
Expenditures	\$2.6M	\$1.6M	n/a	n/a	n/a	\$450K

NOTES:

The following describes the functionality of other urban county telecommunication departments. Although there are similarities in the services that other telecommunication departments provide, no two provide the exact same set of services. Hamilton County’s Telecommunication Division scope of service extends beyond telephone and data drops. Below is an overview of what other urban counties provide in terms of telecommunications.

**Cuyahoga County** Telecommunications Management coordinates voice and data cabling project with the County Information Services Center and County electricians.

**Franklin County** Telecommunications will install data cable from desk to closet and test connection, which is their limitation.

**Montgomery County** has a Data Processing department of 30.5 FTEs with a budget of about \$3.2M. This department is primarily in charge of the Data and Fiber Optic scope of business.

**Marion County** has 1 Manager and 3 Analysts that maintain switch programming for S8700 and 32 remote switches. Two Technicians are contracted from Clawson to install and replace sets. Clawson also provides cabling that is needed at remote sites. Building Authority handles the cabling in the City County building.

**Dade County** is a centralized IT shop. Field Services division handles all phones for the majority of the county. Some 20,000 land lines and 80 employees. Their technicians take care of the whole desktop from network to PC to phones.

**Hamilton County**’s expenditures are based upon the scope above. Their overall expenditures equate to \$2.3M annually. Hamilton County Telecommunications provides other services as stated above.

Attachment E - Vendors Solicited

#	VENDOR NAME	CONTACT	PHONE NUMBER	COMMENTS
1	Cincinnati Bell	Debbie Japp	397-2827	The rates we gave you were purely time and materials. This is the rate we give our good customers. If you contracted out in total we could be more competitive but could not get lower than \$60-\$70 per hour. Hamilton County Telecom does a good job and we do not think we can beat them.
2	911 Etc.	Michael Anderson	425-368-2911	Does not provide that type of service
3	ACS State and Local Solutions	Pedro Carrol	202-756-5627	Bad Telephone number
4	Advanced Concepts	Terry Johnston	321-253-9997	Does not provide this type of service. E-mailed him a copy of the bid documents and he forwarded to his Chicago office
5	Advanced Fiber Optic Services	Ruth McRoy	513-860-4617	Left word no return call
6	Altec Industries	Michelle Stucky	205-991-7733	We sell bucket trucks we are not telecom service providers
7	Ameritel Corporation	Ian Giles	800-881-3848	Does not provide this type of service
8	Avotus	Shawna	866-542-3018 x 6020	Does not provide this type of service but does do call accounting solutions.
9	Bell Consulting Group	Tony Bell	513-272-5066	E mailed hourly rates but not interested
10	Consolidated Communications	Susan Montague	217-234-9947	Left word no returned call
11	Emergency Communications Network	David DiGiacomo	386-676-0294	Does not provide this type of service.
12	Four S Telecom	Saad Hamdan	305-666-7474	Left word no return call
13	Horizon Chillicothe Telephone	Martin Ford	740-772-8550	Left word no return call
14	Illinois Communication Sales Inc.	Sandy Polito	312-243-0588	Left word no return call.
15	MTCI Midwest Telecom	Brett Hubbers	513-755-3400	Does not work on phone systems at all would be interested in bill consolidation.
16	Pericle Communications Company	Dave McGinley	719-229-6404	Does not provide this type of service. He is a wireless consulting firm.
17	Prime Tech Communications	Brad Shoemaker	513-741-1166	Does not provide this type of service.
18	REALM Communications Inc.	Ian Parker	408-945-6626 x 829	Does not provide this type of service.
19	Sabre Communications Co.	Mark Gothier	712-258-6690	Does no provide this type of service.
20	Telecommunications Systems Inc.	Woody Davis	443-324-0364	He will speak with his partner and they will call back. No return call
21	Televate	Meghan Burke	8585-337-5752	Left word no return phone call.
22	Telesoft Solutions Inc.	Don Simons	818-543-5731	Does not provide this type of service. He provides software for telecommunications.
23	Twenty First Century Communications	Eric Sutliff	614-442-1215	Does not provide this type of service
24	U.S. Communications and Electric Inc.	Patricia Kendig	440-519-0880	She will call back with hourly rates. Did not return call.

Attachment F

Vendor Comparables

<b>Vendor Name</b>	Cincinnati Bell	Bell Consulting Group, Inc.
<b>Vendor Contact</b>	Debbie Japp	Tony Bell
<b>Phone #</b>	397-2827	513-272-5066
<b>Installation &amp; Maintenance of Phone Line</b>	\$60.00	\$50.00
<b>Installation &amp; Maintenance of a Data Line</b>	\$60.00	\$50.00
<b>Maintenance &amp; Installation of Voice Mail</b>	\$60.00	\$75.00
<b>Percentage Profit</b>	20%-32%	30-35%
<b>Adds, Moves and Changes-Hardware and Some Programming</b>	\$135.00	
<b>Site Visit</b>	\$60.00	
<b>Adds, Moves and Changes Cable</b>	\$90.00	
<b>Repair Work</b>	\$112.50	
<b>Software Design and Programming Work</b>	\$165.00	
<b>Pull Cable</b>	\$75.00	
<b>Citrix, Cisco, EMC Specialists</b>	\$150.00	
<b>PC and Adds to Network</b>	\$82.50	
<b>Comments</b>	See Note	6/13/06 will email hourly rates

NOTE: Cincinnati Bell Telephone (CBT) supplied their rates over the phone. Due to the multi-tier levels of service, they do not believe they could give us an overall competitive price for service. Examples in their pricing, for Citrix, Cisco, EMC Specialist, CBT charges \$150/hr. PC installs on the network is at a cost of \$100/hr. Costs maybe lowered to \$75 - \$90/hr if predetermined sets of hours are contracted. Other charges, Adds, Moves and Changes-Hardware and some programming \$135/hr plus \$60 trip charge. Adds, Moves and Changes for cable work is \$90/hr. Repair work-\$90 - \$135/hr depending upon the type of system. Software design and programming work is \$165/hr. CBT could block off hours for an on-site technician for about \$75/hr. This tech would be able to pull cable as well. A pure contract cable worker is \$60 - \$65/hr. CBT quoted the following. "The rates we gave you were purely time and materials." "This is the rate we give our good customers." "If you contracted out in total we could be more competitive but could not get lower than \$60-\$70 per hour." "Hamilton County Telecom does a good job and we do not think we can compete with their price."

**Attachment G Customer Service Survey Results**

	<b>Scale of 1-6 (Poor-Excellent)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>N/A</b>	
1.	Prompt Service						3	33		
2.	Willingness to help						1	35		
3.	Accuracy						1	35		
4.	Knowledge						1	34	1	
5.	Courtesy						1	35		
6.	Individualized attention						2	33	1	
7.	How does our technology meet your telecommunications needs?					1	1	33	1	
8.	How do our services meet your department's needs?						1	35		
							0.5%	4%	95%	0.5%

9. Are there additional services you are seeking from us?

Comments: No; better phones; more network and telephone drops; assist in installation of new facility; cordless phones in offices

10. What did we do well?

Comments: Always responsive to our needs immediately; Customer service - polite, efficient, prompt, thorough, knowledge always beyond excellent, professional

11. What can we do better?

Comments: Change the hold music; nothing; need more staff to do more requests at a time, add telecommunication to work order website; communicating equipment improvements as they are available; You can't top the Total Customer Service you now provide!

12. Other comments:

Thanks;  
 Top notch department. Always willing to accommodate our needs;  
 Always courteous;  
 Mitch and crew has **saved us several thousand dollars** with his cost and service;  
 We enjoy a professional relationship;  
 Always pleased with your work and perform excellent work;  
 Great department; excellent workers;  
 The whole staff is a pleasure to work with;  
 The Hillcrest Principal & Asst. Principal were very happy with the work;  
 Best division in the county;  
 We can count on you;  
 We always get great service;

Survey based upon 36 responses

## Attachment H **Additional Efficiency Efforts**

- Managing the county customer service center for 946-INFO for the Commissioners initiative without adding staff.
- Directory Assistance was removed from the employees and is being provided by the Telecommunications Operators. This has been in place for numerous years and has saved the county considerable money.
- Long Distance calls are blocked from all pay per call services, e.g. 900 services, etc.
- Long Distance telephone service is awarded by competitive bid.
- Each county owned building has a fiber optic backbone installed to allow for better and more economical data and voice distribution throughout the building.
- Telecommunications employees are on call 24 hours a day, 7 days a week for all telephone and data equipment in Hamilton. The staff are salaried employees so no overtime cost are incurred.
- All cabling for both voice and data has been standardized making the installation more cost effective. The technicians for the Telecommunications Division have been doing all wiring for virtually all county departments, even those that do not traditionally do “business” with the rest of the county, e.g. separate boards. This saves them and the citizens of Hamilton County money. This also saves other departments and boards money by having the Telecommunications Division do their work for less cost. In no case has a department or board using the telecommunications Division gone back to using an outside vendor.
- All county department traffic for the CLEAR network is routed over the Telecommunications backbone, saving them/the county considerable money for the dedicated lines they formerly used. All CLEAR traffic on the county network is encrypted in accordance with the National Crime Information Center.
- E-Mail Spam and Virus are checked preliminarily as they enter the network. Eliminating Spam and Virus infected e-mails saves countless manpower hours as well as lost productivity.
- The 10 employees of the Telecommunications Division are career employees with 166 combined years of service to Hamilton County. This longevity allows them to become familiar with the physical layout of the buildings along with the organizational layout of the offices: they know who is authorized to make decisions etc.
- The Division is involved with coordinating countywide 9-1-1 efforts among the 5 Public Safety Answering Points (PSAP) as the County’s 9-1-1 Coordinator.
- The Division provides both hardware and software support for the Hamilton County Communications Center.
- The Division is implementing Phase II of the 9-1-1 wireless plan at the County Communications Center. This will allow the callers location to be identified when calling 9-1-1 from a wireless device.

- The Division is involved with evaluating and implementing a new “Next Generation 9-1-1” network at the Communications Center.
- The Division installed and supports the telephone system at a 9-1-1 backup center.
- The Division manages the contract for Inmate Phones for the Sheriff’s office bringing in \$1,200,000 annually for the next 4 years.
- The Division eliminated maintenance contracts on the PBX’s in the county with the exception of the Communications Center’s. The Communications Center’s was maintained due to its being used for 9-1-1 and other life savings calls. The county has been using its own PBX’s for about 10 years and the savings is estimated at \$250,000 per year or \$2,500,000 for the ten-year period.
- The Division consolidated the trunking for the core buildings downtown, realizing a cost savings by also changing the types of trunks. Savings about \$9,000 a month.