

PRAIRIE VIEW A&M UNIVERSITY

RECOVERY STRATEGIES REPORT

MARCH, 2010

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SECTION ONE

Executive Summary

SECTION ONE – EXECUTIVE SUMMARY

1.1 Project Overview

The main objective of the project is to develop a comprehensive Business Continuity Plan for Prairie View A&M University (PVAMU) that provides the ability to quickly recover support for critical operations in the event of a disaster. The project is organized in multiple phases:

- Phase 1 – Business Impact Analysis (BIA)
- Phase 2 – Recovery Strategies Identification
- Phase 3 – Plan Design and Documentation
- Phase 4 – Plan Validation: Training and Testing

The University is heavily dependent upon sophisticated information systems and communications for all aspects of their operations. Most Departments of PVAMU are reliant on complex IT infrastructure and services. The need to provide these critical IT systems on a timely basis requires a highly reliable and available computer and communications infrastructure.

1.2 IT Recovery Strategies Analysis

The objectives of this phase of the project are to:

- Determine alternatives and options
- Determine recovery timeframes
- Correlate the recovery timeframes to the recovery time objectives
- Recommend cost effective recovery strategies

This report identifies recovery strategies for critical information technology systems, infrastructure, and facilities as well as alternate work locations for faculty and staff. The recovery strategies were formulated from information derived from the Business Impact Analysis (BIA) and other sources. The analysis of IT recovery strategies focuses on identifying cost-effective options for the most critical applications and their associated information technology infrastructure used to access and support the applications.

1.3 IT Recovery Strategies Recommendations

We recommend that PVAMU use an internal hot site with data replication for the recovery of the core systems and critical applications in the event of a disaster. College Station is a potential location for an internal hot site. College Station is considered the ISP for PVAMU and manages their traffic to the Internet. PVAMU has up to a gigabit connection to College Station.

The School of Nursing in Houston is another option for an internal hot site. The major concern with this site is that potentially a hurricane could impact both the School of Nursing in Houston and Prairie View A&M University.

The acquisition costs for server hardware could potentially be reduced by the following strategies:

- Acquiring used equipment with adequate speeds and capacities
- Placing the servers used for testing at the internal hot site
- Using older servers (with adequate speeds and capacities) at the hot site as existing servers are replaced by new equipment

PVAMU should use high availability technology and a virtualized environment for the critical servers. The benefits of using an internal hot site compared to the other recovery alternatives are:

- Lower pre-disaster costs
- More control over the recovery process
- No annual subscription fees
- Lower post-disaster costs
- No declaration fees
- Easier and less costly to test
- Faster recovery time
- Ensures system compatibility
- No daily usage fees after a disaster
- Better proximity for PVAMU staff
- Easier transition

1.4 Alternate Work Locations

An important aspect of business continuity planning is to determine an alternate work location if a PVAMU facility is not available. Exhibit B contains a listing of primary and secondary work locations for PVAMU Departments and facilities. The associated minimum resources to perform the critical business processes of each Department of the University has also been determined and documented in Exhibit C including:

- Technology
- Equipment
- Supplies
- Documentation
- Vital Records
- Staff

1.5 Next Project Phase – (Plan Design and Documentation)

The next phase of this project will include developing a comprehensive Business Continuity Plan for PVAMU. The contents of the Plan will follow a logical sequence and are written in a standard and understandable format. The Plan will be brief and to the point and will be written to reduce the time required to read and understand the procedures. This will result in improved Recovery Team performance if the Plan has to be used. The Plan will document the actions necessary to assess the damage or impact of an emergency situation and the activities required to maintain control and recover from the disaster event.

The Plan will ensure minimal disruption to operations and services in the event of significant problems and interruptions, and ensure organizational stability. Although the Plan will cover the worst case of the total loss of the facilities and related IT resources, it will be written in modules so that in the event of a partial loss, the appropriate modules of the Plan can be used to implement the required recovery actions. The Plan will ensure that PVAMU can continue critical operations and services in a timely manner during periods of emergencies and/or disasters. Section 5 contains a description of the Recovery Team Structure.

SECTION TWO

Project Background

SECTION TWO – PROJECT BACKGROUND

2.1 Project Objectives

PVAMU recognizes the devastating impact that a major IT disruption would have on its services and operations. The continued deployment of automation, computers, and communications has elevated the criticality of systems and communications availability. The need to provide these critical systems on a timely basis requires a highly reliable and available computer and communications infrastructure. Accordingly, the objective of this project is to develop a Business Continuity Plan for PVAMU to protect its services and operations.

The Business Continuity Plan will provide the ability to quickly recover support for services in the event of a disaster. This will result in a fully integrated, documented, Business Continuity Plan to restore mission-critical operations and services.

The Plan will ensure minimal disruption to operations in the event of significant problems and interruptions, and ensure stability and an orderly recovery. Although the Plan will cover the worst case of the total loss of the facilities and IT infrastructure, it will be written in modules so that in the event of a partial loss, the appropriate modules of the Plan can be used to implement the required recovery actions.

2.2 Planning Benefits

Time Frame	Benefits Description
Before A Disaster Event	<ul style="list-style-type: none"> ✓ Reduce dependence on key personnel ✓ Improve necessary documentation ✓ Decrease potential threats and exposures ✓ Lower the possibility of a disaster event
During A Disaster Event	<ul style="list-style-type: none"> ✓ Avoid disruptions to critical and essential services ✓ Protect employees, faculty, and students ✓ Safeguard critical assets ✓ Minimize confusion and delays ✓ Minimize decision-making during a disaster
After A Disaster Event	<ul style="list-style-type: none"> ✓ Continue critical operations and services ✓ Reduce potential financial loss ✓ Decrease potential legal liability ✓ Ensure organizational stability and an orderly recovery ✓ Adhere to legal, statutory and regulatory requirements

2.3 Project Methodology

A multi-phased approach is being used to accomplish the objectives of the project. The phases are:

Business Impact Analysis

The Business Impact Analysis identified the critical business processes, and determined the impact of not performing the processes beyond the maximum acceptable outage. The development of the BIA included involvement from all Departments of the University. The critical and essential business processes and their related software applications were identified. Based on the analysis, the related IT infrastructure and server requirements were identified and prioritized.

Recovery Strategies

Important aspects of business continuity planning are to determine recovery strategies and develop written agreements related to the most feasible alternative(s). Numerous unpredictable and often unpreventable hazards can endanger PVAMU. Because of these threats, recovery alternatives for critical IT facilities, systems, and infrastructure were evaluated in this phase of the project. The results of the Business Impact Analysis (BIA) were used to determine the most effective recovery strategies for each consideration. This phase of the process focused on identifying cost-effective recovery strategies for critical IT resources.

Business Continuity Plan

The contents of the Plan should follow a logical sequence and be written in a standard and understandable format. The Plan, which should be brief and to the point, should be written to reduce the time and effort required for reading and understanding the procedures, and provide improved Recovery Team performance if the Plan has to be used. The Plan will ensure that PVAMU can continue critical operations and services in a timely manner during periods of emergencies and/or disasters.

Training and Testing

It is essential that training be provided for all team members and other participating personnel. In addition, the Plan should periodically be tested and evaluated at least once a year and more frequently when systems or process changes result in Plan changes. Procedures to test the plan are documented in the Testing Plan. The tests will provide PVAMU with the assurance that all necessary steps are included in the Plan.

The tests will also provide information regarding any further steps that may need to be included, changes in procedures that are not effective or other appropriate adjustments. The Plan must then be updated to correct any problems identified during the test. Testing should also be a part of the method for training the team members on the Plan.

SECTION THREE

Overview of IT Recovery Strategies

SECTION THREE – PROJECT BACKGROUND

3.1 Overview

This section contains a description of various recovery strategies in relation to the needs of PVAMU. Potential computer recovery strategies include:

- Commercial hot sites
- Commercial cold sites
- Colocation services
- Vendor supplied equipment
- Cooperative/consortium arrangement
- Commercial warm sites
- Internal hot sites
- Reciprocal agreements
- Quick ship arrangements
- Data replication

3.2 Commercial Hot Sites

A hot site is a fully equipped backup site that is provided by an outside vendor. Hot sites tend to be the most expensive alternatives available for contingency processing. A hot site may be using data replication or electronic vaulting that allows the transmission of backup copies of computer data through telecommunication lines to a storage facility at the hot site location. A fully equipped hot site service may feature amenities beyond the necessary equipment to process data including varying degrees of security, fire protection, and telecommunications capabilities. Security could be elaborate, including electronic card-entry systems, 24-hour security guards, motion detection systems, water sensors, and closed circuit television.

Hot sites vary in size and square feet, depending on the systems involved. Most offer uninterruptible power supply systems (UPS) and power generators, which are used primarily for power backup during electrical outages.

An important factor in selecting a hot-site service is compatibility of equipment and software. Certain companies specialize in specific brands of equipment. However, the hot site must have adequate processor memory, disk storage, tape density, and speed, and capacity to support information services operations during an emergency.

Some services have membership limits and promise minimal response times. The membership and type of service dictate the fee for the service. Some hot site services are paid monthly and extra charges are billed for each test of the hot site; some billing is annual. Usage fees vary depending on hardware needed. Services also vary from minimum to maximum use in the period they would be available.

Mobile computer hot sites are also available for specific equipment. In this case, a large trailer containing backup equipment and peripheral devices is sent to the scene of the disaster and connected to existing communications lines. With this option, it is important to have the connections for electricity and communication circuits pre-established in a "hitching post." This will save time in the overall recovery effort.

Advantages

The advantages of a hot site include the following:

- Hot sites are generally available following a disaster, especially if the subscription is with a larger provider with multiple locations.
- Hot site providers can offer all necessary environmental equipment, computer equipment, communications equipment and technical support staff for alternative site processing.
- Hot sites can be routinely tested to ensure compatibility of hardware, operating software, communications network, etc. They can also be tested remotely without having to travel to the hot-site location.
- The configuration requirements at a hot site can typically be expanded by purchasing more computing power. Multiple processors are usually available and the subscriber pays only for the capacity required at the time. As an organization's requirements grow, the contract can be expanded with the hot-site provider.

Disadvantages

The disadvantages of a hot site include the following:

- Hot sites tend to be an expensive recovery strategy alternative.
- Daily usage fees at a hot site tend to be very expensive.
- Hot sites are only available for a fixed period of time, usually six weeks or less. Within this period of time, the organization must rebuild or relocate its data center to a cold-site facility or another, more permanent location.
- The hot site may not be able to provide for special equipment requirements, such as unique laser printers, forms handling equipment, etc.
- Travel to the commercial hot site may not be possible due to the disaster event or poor weather conditions.
- The travel time to the commercial hot site could increase the restoration time.
- Customers are not assured of the specific hot site location depending on the circumstances of the disaster event. Accordingly hot site customers may be diverted to another location.

Applicability to PVAMU

A commercial hot site is not applicable to PVAMU for the following reasons:

- Hot sites are only available for a fixed period of time, usually six weeks or less. Within this period of time, the organization must rebuild or relocate its data center to a cold-site facility or another, more permanent location.
- Commercial hot sites tend to be more applicable for organizations with mainframe systems.
- Travel to the commercial hot site may not be possible due to poor weather conditions.
- The travel time to the commercial hot site could increase the restoration time by at least one day.

3.3 Commercial Warm Sites

A commercial warm site is a backup site that does not have replicated or vaulted data. The data would need to be restored from electronic media such as tape. If a warm site is chosen as a backup, PVAMU should ensure that the data can be obtained and restored quickly for contingency processing.

Advantages

The advantages of a warm site include the following:

- A warm site is typically a lower cost recovery strategy in comparison to hot sites, yet offers a greater degree of protection to the organization than a cold site.
- A warm site will already contain major equipment components. This should reduce the elapsed time necessary to fully restore processing.

Disadvantages

The disadvantages of a warm site include the following:

- Warm sites may have a longer recovery period because of additional time to ship, load and restore data from backup media.
- The time frame necessary to restore will not meet the requirements for the recovery time required by PVAMU.
- Travel to the commercial warm site may not be possible due to the disaster event or poor weather conditions.
- The travel time to the commercial warm site could increase the restoration time.

Applicability to PVAMU

A commercial warm site is not applicable to PVAMU. The time frame necessary to restore will not meet the recovery time required by PVAMU based on the following reasons:

- Warm sites would have a longer recovery period because of additional time to ship, load and restore data from backup media.
- Travel to the commercial warm site may not be possible due to poor weather conditions.
- The travel time to the commercial warm site could increase the restoration time by at least one day.

3.4 Commercial Cold Sites

Some organizations choose to acquire cold-site services from the outside or provide empty-shell capabilities internally. A cold-site is an environmentally protected computer room equipped with air conditioning, wiring, and humidity control for continued processing when the equipment is shipped to the location. Some cold-sites have communication links already set up in case of a disaster. A cold-site would be the least expensive method of the site options discussed, but the most difficult and expensive to test.

Some companies specialize in providing portable cold-site services. In this scenario, an environmentally protected and readied structure would be transported to the disaster site so equipment could be obtained and installed near the original location. These services are relatively inexpensive and are available nationwide.

Advantages

The advantages of a cold site include the following:

- A cold site is the low cost strategy in comparison to warm sites and hot sites, yet offers some degree of protection to PVAMU.
- A cold site generally contains all the environmental equipment, such as a UPS system and air conditioning, to protect the computer system. There may be security systems and, in some instances, communications links already established in the event of a disaster.
- Portable cold sites are also available. In this scenario, an environmentally protected and readied structure could be transported to the disaster site so equipment can be obtained and installed near the original data center location.

Disadvantages

The disadvantages of a cold site include the following:

- Cold sites cannot be tested unless equipment is expedited and communications lines installed.
- Cold-site testing is often expensive because the equipment must be temporarily rented or leased, shipped to the cold site, installed, and then returned to its owner.
- The time frame necessary for restoration will not meet the recovery time required by PVAMU.

Applicability to PVAMU

A commercial cold site is not applicable to PVAMU for the following reasons:

- The time frame necessary to restore will not meet the recovery time required by PVAMU.
- Cold sites cannot be tested unless equipment is expedited and communications lines installed.
- Cold-site testing is often expensive because the equipment must be temporarily rented or leased, shipped to the cold site, installed, and then returned to its owner.

3.5 Internal Hot Sites

Another recovery strategy is to establish an Internal Hot Site. An Internal Hot-Site is a fully-equipped backup site for the critical systems required by PVAMU. This alternative is more applicable to server computing because the cost of server equipment is lower than a mainframe and requires less space and a less restrictive environment. Used equipment may also be available, either through the original vendor or through equipment brokers.

Additional complications may arise when implementing this alternative, such as equipment obsolescence and replacement. Some organizations choose to keep their older processors when upgrading equipment and use the older units as backup equipment. The Internal Hot Site should be sufficiently distanced from the original computer location to prevent the destruction of both the primary and backup sites in the same disaster event.

Advantages

The advantages of an Internal Hot Site include the following:

- An Internal Hot Site is easier to test than most other alternatives because of the similarity of operating environment and applications processed.
- An Internal Hot Site provides additional resources for other uses. It could assist in maintaining service levels in times of high transaction volume and growth.
- An Internal Hot Site reduces or eliminates the need for hot-site/cold-site fees, including monthly subscription fees, declaration fees, daily usage fees, etc.
- Technical support staff would be more familiar with the operating environment in an Internal Hot Site.
- Technical support staff would not have to set-up a completely new operating environment if one already exists.
- Support staff could generally be available at the Internal Hot Site.

Disadvantages

The disadvantages of an Internal Hot Site include the following:

- Cost of operating an Internal Hot Site.
- Management and operation of potentially two facilities could be more complex.
- Requires additional space availability.

Applicability to PVAMU

An Internal Hot-Site is a viable recovery strategy for PVAMU. An Internal Hot Site would have all the advantages listed above as well as the following:

- Servers that are used primarily for software development and testing could be relocated to the Internal Hot Site to reduce the cost of a second site.
- The time frame necessary for restoration meets the requirements for the recovery time required by PVAMU.
- An Internal Hot Site could continue to provide processing for critical business processes.
- An Internal Hot Site would be easier to test than most other alternatives because of the similarity of operating environment and applications processed.
- An Internal Hot Site could provide additional resources for other uses.

- An Internal Hot-site would reduce or eliminate the need for hot-site / cold-site fees, including monthly subscription fees, declaration fees, daily usage fees, etc.
- Technical support staff would be more familiar with the operating environment in a second data center. Technical support staff would not have to set-up a completely new operating environment if one already exists.
- Support staff could be available at the second site.

3.6 Colocation Services

Another recovery strategy is to establish a contract with a colocation service provider. This strategy allows an organization to pre-position and install critical server(s) on the premises (data center) of a third-party colocation provider. The vendor provides IP(s), bandwidth, and power to the installed server(s).

There are two costs associated with the colocation of servers. The rental fee is the cost to rent the rack space your server(s) require in the data center and is calculated by the height of the server in U's (U is the standard unit of measure for designating the vertical usable space, or height of racks (metal frame designed to hold hardware devices) and cabinets (enclosures with one or more doors). Most servers come in either 1U or 2U configurations but can be as large as 3U or 4U.

The second cost is the connection charge which is sometimes calculated by dividing the amount of bandwidth used during a month and dividing it by the number of seconds in that month or calculating the cost using a system called "95th percentile" in which bandwidth measurements are taken every 5 minutes. At the end of the month the top 5% of readings are discarded and the highest remaining reading left is the amount billed to the customer.

Additionally, there are other considerations and several decisions the organization must make in order to determine the exact level of service required from a colocation service provider. Some additional items include:

- The location of the colocation facility should be sufficiently distanced from the original computer location to prevent the destruction of both the primary and backup sites in the same disaster event.
- It is extremely important that the selected colocation service provider be SAS 70 certified. The Statement on Auditing Standards (SAS) No. 70, Service Organizations, is an internationally recognized auditing standard developed by the American Institute of Certified Public Accountants (AICPA). A SAS 70 audit or service auditor's examination is widely recognized, because it represents that a service organization has been through an in-depth audit of their control activities, which generally include controls over information technology and related processes.

Advantages

The advantages of using colocation services include the following:

- Shared costs (i.e. Bandwidth, utilities, and infrastructure) so the overall cost may be lower than other alternatives.
- Equipment is owned so it would be easy to upgrade or replace the server(s) when necessary.
- A colocation facility provides a safe and secure environment and will provide a UPS system, power generator, air conditioning, fire suppression and security systems to protect the server(s).
- Colocation of server(s) could continue to provide processing for critical business processes.

Disadvantages

The disadvantages of using colocation services include the following:

- Colocation service providers may be difficult to locate within a reasonable distance from PVAMU, therefore travel may be involved.
- Costs may be higher than an internal hot site.

Applicability to PVAMU

Colocation services are not applicable for PVAMU. They would have all the disadvantages of an internal hot site and the costs would be higher.

3.7 Reciprocal Agreements

Reciprocal agreements allow an organization that has an outage to their computer systems as a result of a disaster event, to use another organization's computer systems and vice versa. In the past, when data processing was more batch-oriented than online oriented, reciprocal agreements were common. Reciprocal agreements assume that adequate resources are available at the reciprocal site and adequate time is available for processing — probably during third-shift operations.

Reciprocal agreements are not practical for most systems that require extensive online processing or require batch processing beyond one shift to accomplish a day's work. Reciprocal agreements tend to be inexpensive and, in many cases, cost nothing. The use of reciprocal agreements for backup purposes is also discouraged because there is usually no guarantee involved.

Advantages

The advantages of reciprocal agreements include the following:

- Reciprocal agreements could be relatively inexpensive in comparison to other alternatives or, in some cases, have no cost.
- Reciprocal agreements are easy to administer and conceptually understand.
- It is possible to test reciprocal agreements for critical applications.

Disadvantages

The disadvantages of reciprocal agreements include the following:

- Processing resources may not be adequate to process critical applications for the organization.
- With changing requirements, equipment and operating software may not be compatible between both sites.
- Often, the only time available for processing is during the third-shift, which is probably outside of the business hours of the using organization.
- Often, no guarantee of availability is provided. The site may not be available following a disaster.
- Security may be an important concern.

Applicability to PVAMU

Reciprocal agreements are not applicable for PVAMU. They would have all the disadvantages listed above as well as the following:

- Processing resources may not be adequate to process critical applications for PVAMU.
- With changing requirements, equipment and operating software may not be compatible between the reciprocal site and PVAMU, and there is no guarantee of availability.

3.8 Vendor Supplied Equipment

Many vendors will promise, in writing or verbally, “should a disaster strike, you will receive the next machine of comparable capability from the manufacturing line for shipment to the disaster recovery site.”

Advantages

The major advantage of vendor-supplied equipment is:

- Minimal cost.

Disadvantages

The relative risks associated with this means of recovery are:

- The equipment may no longer be manufactured.
- Some peripheral equipment may be difficult to obtain.
- A delay may be experienced in identifying hardware and components, shipping them, installing them, and making them ready for operations. A minimum of one week could be experienced.
- Costs could be high for expediting shipment at the time of the disaster.
- This alternative is difficult to test.
- The time frame necessary to restore will not meet the requirements for the recovery time required by PVAMU.

Applicability to PVAMU

Vendor supplied equipment for the critical the applications is not applicable to PVAMU due to the following reasons:

- The time frame necessary to restore will not meet the requirements for the recovery time required by PVAMU.
- The equipment may no longer be manufactured.
- Some peripheral equipment may be difficult to obtain.
- A delay may be experienced in identifying hardware and components, shipping them, installing them, and making them ready for operations. A minimum of one week could be experienced.
- Costs could be high for expediting shipment at the time of the disaster.
- This alternative can not be tested.

3.9 Quick Ship Arrangements

For server and PC applications, the organization could designate certain equipment that can be shipped in an emergency situation to PVAMU. These arrangements can be pursued with equipment manufacturers, brokers, and dealers for expediting PCs, file servers, printers, and other peripheral devices following an emergency.

Server backup files would need to be obtained from the off-site storage facility and a minimal number of PCs, servers, and other equipment could be dispatched to the recovery location from equipment manufacturers, brokers, or dealers. Network personnel would then restore the servers from server backup files and establish server connectivity with the users and pricing and market services. At that point, the organization could perform ongoing operations from the temporary location.

Advantages

The advantages of quick ship arrangements include the following:

- Relatively low cost.
- The time frame for shipping is usually within 48 hours.
- Usually there is no declaration fee.
- PVAMU has a location available for receiving shipment of the equipment.

Disadvantages

The disadvantages associated with this method of recovery are:

- Some equipment may not be available for quick ship arrangements.
- A delay may be experienced in identifying hardware and components, shipping them, installing them, and preparing them ready for operations.
- Costs could be high for expediting shipment at the time of the disaster.
- This alternative is difficult to test.
- Quick ship arrangements would not meet the restoration time frame for the critical systems.

Applicability to PVAMU

Quick ship arrangements are not applicable for the critical PVAMU systems due to the following:

- The time frame necessary to restore the critical applications will not meet the requirements for the recovery time required by PVAMU.
- The equipment may no longer be manufactured.
- Some peripheral equipment may be difficult to obtain.
- A delay may be experienced in identifying hardware and components, shipping them, installing them, and making them ready for operations. A minimum of one week could be experienced.
- Costs could be high for expediting shipment at the time of the disaster.
- This alternative can not be tested.

3.10 High-Availability Technology

Overview

To enable PVAMU to gain the most benefit from implementing an internal recovery strategy, it is important that appropriate technology be selected to support its systems between the two locations. This technology must cover all aspects of a disaster recovery strategy, including:

- Connectivity for users – How will the user be redirected to the correct data center, in the event one suffers an outage?
- Data replication – In order to ensure seamless failover, critical systems in both data centers need up-to-date software and data.
- Rapid Recoverability for non-critical systems – In the event an outage at one of the data centers is extensive, how soon can the rest of the systems be recovered?

Network Load-Balancing / Fail-Over

The first aspect of running multiple data centers at the same time is connectivity. Configuring the network to automatically load balance between two servers can be a challenging task with many alternatives. Load balancing between two different data centers is even more complicated, due to the fact that network traffic has a choice of two completely different networks that are attempting to respond to a single request.

Overall, there are three types of rapid recoverability configurations PVAMU can choose from:

- Option 1 – Fully automated failover and load-balancing. The system should automatically realize when one of the other servers becomes overloaded or otherwise unavailable, and intelligently redirect traffic.
- Option 2 – Automated failover in the event of an outage only. All traffic will always flow to the server designated as primary, and only re-route traffic to the secondary in the event of a prolonged outage.
- Option 3 – Manual failover in the event of an outage only. All traffic will flow to the server designated as primary, and only re-route traffic in the event someone manually instructs the system to do so.

Replication Methods

There are two primary replication methods used for DR purposes:

- Real-Time – When data changes on one system, the change is replicated to the other system as soon as possible.
- Periodic Snapshots – A snapshot of all the changes is periodically transferred from one system to the other.

Real-time replication should be considered for systems requiring that 100% of the data on the system be available offsite at the exact moment the outage has occurred. Additionally, this level of replication is useful for applications with very frequent data changes, in order to make sure the servers in the offsite facility remain usable and relevant. Those servers where data does not change very often, the most up-to-date information is not as critical, or data changes are too large to replicate in real-time, it is better and more efficient to configure a periodic snapshot replication.

A bare metal restore option is one where a computer system is backed up from bare metal state. This type of data recovery includes using a backup to restore the operating system, application data, user data, and software. The hardware system the restore is being done on must be the exact same configuration as the system the restore was created for.

Another important replication consideration is the amount of bandwidth capacity between the two data centers. Whether the replication is real-time or scheduled snapshots, the bandwidth requirements can be determined by estimating the amount of data changing on an hourly basis. At a minimum, the total amount of data changed per hour should be the same or less than the bandwidth capacity available. The table below outlines various WAN technologies, and the amount of data that can be transferred between the two data centers:

	T1	T3	OC3	OC12	GbE	OC48	OC192	10 GB
Mb/sec	1.5	45	155	622	1000	2488	9952	10000
Usable Megabits transferred in one second	1.5	45	140	564	1000	2254	9017	10000
Usable Megabytes transferred in one second	0.19	5.63	17.55	70.44	125	281.77	1127.06	1250
Gigabytes transferred in one hour	0.6	17.8	57	228.8	439	915.1	3962	4394

Deduplication

Deduplication is a storage technology strategy that eliminates redundant data by deleting duplicate data typically stored across multiple applications, servers, and storage systems. Depuplication provides the ability to reduce the required storage capacity by storing only one instance of the data. Indexing of the data is still retained should access to that data be required.

Advantages

The advantages of high availability technology include:

- Reduces recovery time
- Minimizes the amount of data to be stored
- Minimizes potential loss of data
- Improves bandwidth efficiency
- Reduces the need for some backup processing
- Lowers storage costs

This alternative is appropriate for applications that need to be restored in a very short time period such as hours.

Disadvantages

The disadvantages of high availability technology include:

- Higher cost
- Additional equipment needed

Applicable to PVAMU

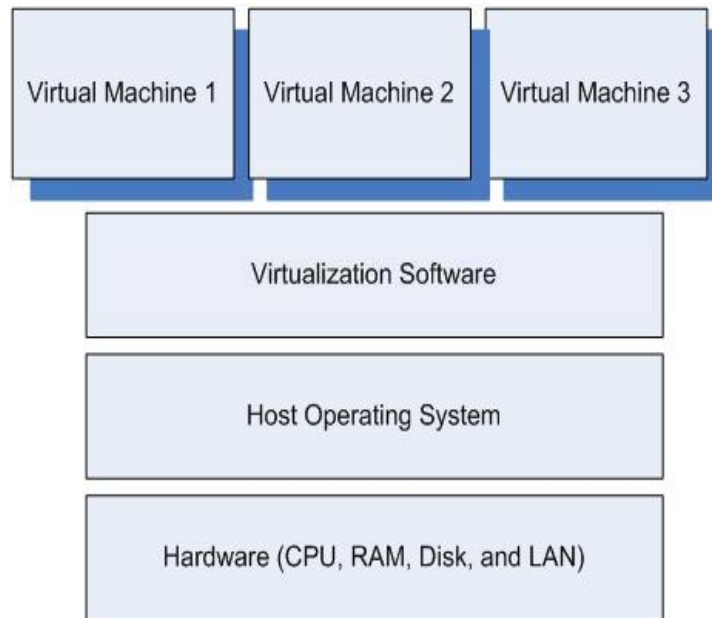
High availability technology is a good alternative for PVAMU.

3.11 Virtualized Environments

Server Virtualization

Virtualization, in its simplest interpretation, is a system that emulates hardware components, allowing creation of multiple virtual computers running on a single physical computer. Over the last several years this simple concept has been maturing and developing into advanced and powerful solutions that enable organizations to reach physical to virtual computer ratios of 10:1. Additionally, the new generation of virtualization systems has the capabilities of utilizing highly available technologies such as clustering, rapid recoverability, and SANs.

The following diagram depicts a conceptual diagram illustrating the architecture behind virtualization technology:



Virtualization software runs on top of the Operating System, similar to many other applications, except the software emulates hardware, in order to support running multiple virtual computers on top of a single physical computer. Advances in virtualization have enabled high levels of efficiency and reduction of overhead required to provide a virtualized computer environment, allowing virtual machines to run with near-hardware speeds.

Storage Virtualization

Storage virtualization is a technique that makes disparate pools of storage capacity appear as a consolidated pool. This consolidated pool allows for much greater utilization of existing capacity (and with industry utilization hovering between 30 - 40%, Gartner Group 2005) this increased utilization can delay or even defray additional storage purchases.

From a high level perspective, storage virtualization can exist in three different locations; in the host system, in the network and at the storage controller level. Each of the four big hardware vendors (IBM, EMC, Hitachi Data Systems and Network Appliance) uses some type of these methods and a brief overview of each type of virtualization follows:

- Host-based - The first type of virtualization (Veritas) is mostly unused as it is plagued by a lack of scalability. Further, this type of virtualization takes precious CPU cycles and requires more servers, licenses and maintenance as the virtualization environment grows.

- Network-based – Used by IBM in its SVC product and EMC in its Invista product. These solutions require choosing between in-band virtualization (IBM) and out-of-band (EMC) and the installation of an appliance in the network path. The largest argument against network-based virtualization is the increased complexity that is introduced when another device is placed in the network layer (EMC uses proprietary switches from Cisco or Brocade and IBM typically introduces an Xseries server into the network).
- Controller-based – Used by Hitachi Data Systems and Network Appliance these solutions perform the virtualization in the storage frame, which, while it doesn't add network complexity usually requires that a separate storage array to conduct the virtualization.

Another consideration regarding a virtualization technique surrounds the deconversion of virtualized resources. It can be very difficult, and therefore expensive, to deconvert a storage resource that has been virtualized.

Advantages

The advantages of virtualization include:

- Virtualized servers require much smaller physical footprint, reducing the reoccurring costs associated with the rental of the physical server rack space and power utilization expenses.
- Virtualized servers, if used in conjunction with the SAN, can be made to be physical server independent. In the event of a single server failure, virtual servers will automatically re-locate to a different physical server.
- Virtual servers, if used in both the primary and redundant locations, can make it very easy and reliable to replicate a complete system from one datacenter to another, without having to have the exact same hardware at both locations.

Disadvantages

The disadvantages of virtualization include:

- Higher initial costs
- More complex technology

Applicable to PVAMU

Server and storage virtualization are good alternatives for PVAMU and can facilitate the disaster recovery strategy.

SECTION FOUR

IT Recovery Strategies Recommendations

SECTION FOUR – IT RECOVERY STRATEGIES RECOMMENDATIONS

4.1 Overview

This section contains an analysis of various recovery strategies for the computer systems. All recovery strategies assume the following:

- Vendors will continue to provide goods and services as required.
- Key staff members are available to perform the necessary procedures described in the Plan.
- Technical staff can be notified and can report to the recovery site to perform critical processing, recovery and restoration activities.
- Off-site storage media and materials are available.
- Backup media are current, correct, and readable.
- Data replication is current, correct, and readable.
- The recovery site is available.
- Communications equipment and lines are available to establish backup communications from the recovery site to the users.

4.2 Recovery Strategy Comparison

This section of the report compares various recovery strategies using several *Evaluation Factors*. Each *Evaluation Factor* is assigned a **Priority** (High, Medium, Low, or N/A) as listed below, and each recovery strategy is assigned a **Rank** (Completely, Partially, No, or N/A) as listed below. The score is calculated by multiplying the **Priority** times the **Rank** (**Priority X Rank = Score**) using the values in the legend.

Priority and Rank Values:

Priority	Rank
High = 3	Completely meets requirements = 5
Medium = 2	<i>Partially meets requirements = 3</i>
Low = 1	<i>Does not meet requirements = 1</i>
<i>Not Applicable = 0</i>	<i>Not Applicable = 0</i>

The table presented below compares the following recovery strategies:

Commercial Hot Site

Internal Hot Site

Collocation

Quick Ship Agreement

		Recovery Strategy Options							
		Commercial Hot Site		Internal Hot Site		Collocation Hot Site		Quick Ship Agreement	
Evaluation Factors	Priority	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Recovery Time Objectives	High	5	15	5	15	5	15	1	3
Recovery Point Objectives	High	5	15	5	15	5	15	3	9
System Compatibility	High	4	12	5	15	5	15	4	12
Security	High	5	15	5	15	3	9	5	15
Subscription Fees	Medium	1	2	5	10	2	4	3	6
Declaration Fees	Medium	1	2	5	10	5	10	3	6
Daily Usage Fees	Medium	1	2	5	10	5	10	3	6
Data Communications	High	5	15	5	15	5	15	5	15
Voice Communications	High	5	15	5	15	5	15	5	15
Availability	High	5	15	5	15	5	15	2	6
Proximity	Low	5	5	5	5	5	5	3	3
Transition	Medium	5	10	5	10	5	10	5	10
Technical Support Availability	High	3	9	5	15	5	15	5	15
Hardware Configuration	Medium	5	10	5	10	5	10	5	10
Processing Capacity	Medium	5	10	5	10	5	10	5	10
Expandability	Medium	3	6	5	10	5	10	5	10
Area-Wide Disaster Consideration	High	5	15	5	15	5	15	3	9
Testing Feasibility	High	5	15	5	15	5	15	1	3
Testing Cost	High	3	9	5	15	5	15	1	3
Maintenance Costs	High	5	15	3	9	3	9	5	15
Development Costs	High	5	15	3	9	3	9	5	15
Total			227		258		246		196

4.3 Recommended Recovery Strategies

Based on the recovery strategy comparison below, we recommend that PVAMU use an internal hot site with data replication for the recovery of the core systems and critical applications in the event of a disaster. In addition, PVAMU should consider using a quick ship arrangement for applications with recovery objectives of more than 48 hours.

The estimated acquisition costs for server hardware could potentially be reduced by the following strategies:

- Acquiring used equipment with adequate speeds and capacities
- Placing the servers used for testing at the internal hot site
- Using older servers (with adequate speeds and capacities) at the hot site as existing servers are replaced by new equipment

Recovery Strategy	Contract	Relative Risk	Relative Cost	Estimated Recovery Time
Commercial Hot Site – With Data Replication	Yes	Minimal	Very High	2 - 4 hours
Commercial Warm Site – Without Data Replication	Yes	Minimal	High	48 – 72 hours
Internal Hot Site – With Data Replication	N/A	Minimal	Medium	2 - 4 hours
Colocation Services – With Data Replication	Yes	Low	Medium	2 - 4 hours
Quick Ship Arrangement – With Data Replication	Yes	Low	Low	48 - 72 hours
Vendor Supplied	No	High	None	Over 120 hours
Reciprocal	No	High	None	Over 120 hours

4.4 Benefits

The benefits of an internal hot site compared to a commercial hot site are:

- Lower pre-disaster costs than a commercial hot site
- No annual subscription fees for the internal hot site equipment
- No declaration fees for the internal hot site equipment
- Faster recovery time
- No daily usage fees after a disaster for the internal hot site equipment
- More control over the recovery process
- Lower post-disaster costs than a commercial hot site
- No travel required to a commercial hot site location
- Easier transition to an internal hot site
- Easier and less costly to test
- Ensured system compatibility
- Guaranteed availability of the internal hot site
- Extra capacity can be used for testing, upgrading, and special processing

The major disadvantages of an internal hot site are:

- Annual maintenance costs (This can be partially mitigated by using depot maintenance.)
- Equipment obsolescence (This can be partially mitigated by moving the servers that are periodically being replaced to the internal hot site. This may result in some degrading of service at the time of disaster until the server can be upgraded.)

4.5 PC Recovery Strategies

The most feasible recovery strategy for standard PC configurations is to acquire the PCs at the time of need. PVAMU should use the provisions for emergency purchasing to acquire PCs at the time of need. If the PC is critical and the configuration is not readily available, then the following alternates may be used:

- Quick ship arrangement
- Acquiring spare PCs and locating them at an off site location

SECTION FIVE

Alternate Work Locations

SECTION FIVE – ALTERNATE WORK LOCATIONS

5.1 Overview

An important aspect of business continuity planning is to determine an alternate work location if a PVAMU facility is not available. The major options for alternate work locations include:

- Commercial Workgroup Recovery Alternatives
- Alternate PVAMU Facilities

5.2 Commercial Workgroup Recovery Options

A number of recovery services providers offer workgroup recovery. Workgroup recovery is a term describing a method of providing an organization with a fully equipped place to work while restoration activities are being performed on the original facility. Therefore, while the technology recovery team is restoring files and connecting the computer system(s) and communications network, the organization's work force can set up operations in a work center.

The major advantage of workgroup recovery alternative is availability if needed. The major disadvantage is cost. Vendors typically charge a monthly subscription fee for the workgroup recovery alternative and a daily usage fee if it is used.

Work centers can be either fixed location facilities or mobile facilities.

Fixed-Location Work Centers

Typically, fixed-location work centers are regionally located and ready for immediate occupancy. The facilities are generally secure, with adequate access controls and security, and contain offices, desks, telephones, copying machines, facsimile equipment and other amenities, such as break rooms and vending areas. Under contractual arrangements, work centers can be equipped with the necessary PCs and servers to immediately provide employees with the environment for productive operations. Work centers can also be used temporarily as command centers where the management team would operate and direct recovery and restoration activities immediately following a disaster. These centers can be equipped with ACD (Automatic Call Distribution) switches to direct, monitor and adjust incoming and outgoing calls. Prerecorded messages can be used until direct customer contact can be reestablished.

Mobile Work Centers

Mobile work centers also offer an alternative as temporary workspace in a disaster scenario for smaller workgroups. Recovery service vendors offer delivery of mobile work centers with desks, telephones, copying machines, facsimile equipment, and air conditioning within 24 hours of notification anywhere in the country. Testing for mobile work centers can be on a fee-per-test basis. Assuming the work center could be set-up near the original facility; employees would not be required to leave their families for long periods of time.

5.3 Alternate PVAMU Facilities

Another option for alternate work locations is for PVAMU to use existing facilities as alternate work locations. The advantages of this approach are no subscription or daily usage charges. The major disadvantage is available capacity at the time of disaster.

Exhibit B contains a listing of primary and secondary work locations for PVAMU Departments and facilities. The associated minimum resources to perform the critical business processes of each Department of the University has also been determined and documented in Exhibit C including:

- Technology
- Equipment
- Supplies
- Documentation
- Vital Records
- Staff

Use of existing facilities as alternate work locations is a good approach for the University. PVAMU should review and update the listing of primary and secondary work locations on a periodic basis.

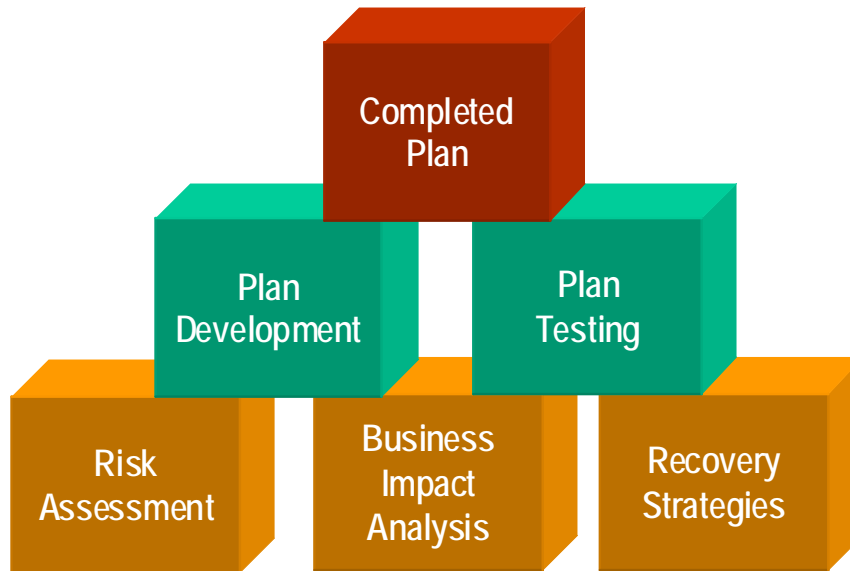
SECTION SIX

Alternate Work Locations

SECTION SIX – BUSINESS CONTINUITY PLAN (NEXT PHASE)

6.1 Overview

The first two phases of Business Continuity Planning have been completed (Business Impact Analysis and Recovery Strategies). We will continue the planning process and complete the remaining phases of the planning process as presented in the diagram below. An important aspect of the methodology is that each phase of the process is built on a solid foundation.



Plan Design and Documentation: The contents of the Plan will follow a logical sequence and be written in a standard and understandable format. The Plan, which should be brief and to the point, should be written to reduce the time and effort required for reading and understanding the procedures, and provide improved Recovery Team performance if the Plan has to be used. The Plan should document the initial actions necessary to assess the damage or impact of an emergency situation and the activities required to maintain control, activate the Plan, and recover from the disaster event.

A well-designed and organized continuity plan will directly affect the recovery capabilities of PVAMU. The contents of the plan should follow a logical sequence and be written in a standard and understandable format. Effective documentation and procedures are extremely important in a Business Continuity Plan. Poorly written procedures can be extremely frustrating, difficult to use and become outdated quickly. Well-written plans reduce the time required to read and understand the procedures and, therefore, result in a better chance of success if the plan has to be used. Well-written plans are also brief and to the point.

Training and Testing: It is essential that training be provided for all team members and other participating personnel. In addition, the Plan should periodically be tested and evaluated at least once a year and more frequently when systems or process changes result in Plan changes. Procedures to test the plan should be documented in the Testing Plan. The tests should provide PVAMU with the assurance that all necessary steps are included in the Plan. Other reasons for testing include:

- Determining the feasibility and compatibility of backup arrangements and procedures
- Identifying areas in the Plan that need modification
- Providing training to the team managers and team members
- Demonstrating the ability of PVAMU to recover
- Providing motivation for maintaining and updating the Business Continuity Plan

The tests should also provide information regarding any further steps that may need to be included, changes in procedures that are not effective or other appropriate adjustments. The Plan must then be updated to correct any problems identified during the test. Testing should also be a part of the method for training the team members on the Plan.

Potential types of tests could include:

- Simulation /Structured walk-through tests
- Critical application tests
- Recovery service tests
- Checklist tests
- Tabletop tests
- Communications tests
- Network tests
- Recovery center tests

6.2 BCP Structure and Organization

National Incident Management System

The BCP will be structured in accordance with the National Incident Management System (NIMS). NIMS enhances the management of domestic incidents by establishing a single, comprehensive system for incident management and will help achieve greater cooperation among agencies at all levels of government. This system provides a consistent nationwide approach for federal, state, and local governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

NIMS provides a way for all government and private entities at all levels to work together to manage an incident, regardless of that incident’s cause, size, location, or complexity. In addition, NIMS provides requirements for processes, procedures, and systems aimed at improving agency interoperability. The NIMS components include:

- Command and management
- Resource Management
- Supporting technologies
- Preparedness
- Communications and information management
- Ongoing maintenance and management

Incident Command System

The BCP will be organized according to the Incident Command System (ICS). The major functional areas of ICS include: (1) Command, (2) Operations, (3) Planning, (4) Logistics, and (5) Finance/Administration. Listed below are the primary functions of the major ICS positions.

Major ICS Position	Primary Functions
Incident Commander	<ul style="list-style-type: none"> • Have clear authority and know PVAMU policy. • Ensure incident safety. • Establish the ICP. • Set priorities, and determine incident objectives and strategies to be followed. • Establish ICS organization needed to manage the incident. • Approve the IAP. • Coordinate Command and General Staff activities. • Approve resource requests and use of volunteers and auxiliary personnel. • Order demobilization as needed. • Ensure after-action reports are completed. • Authorize information release to the media.

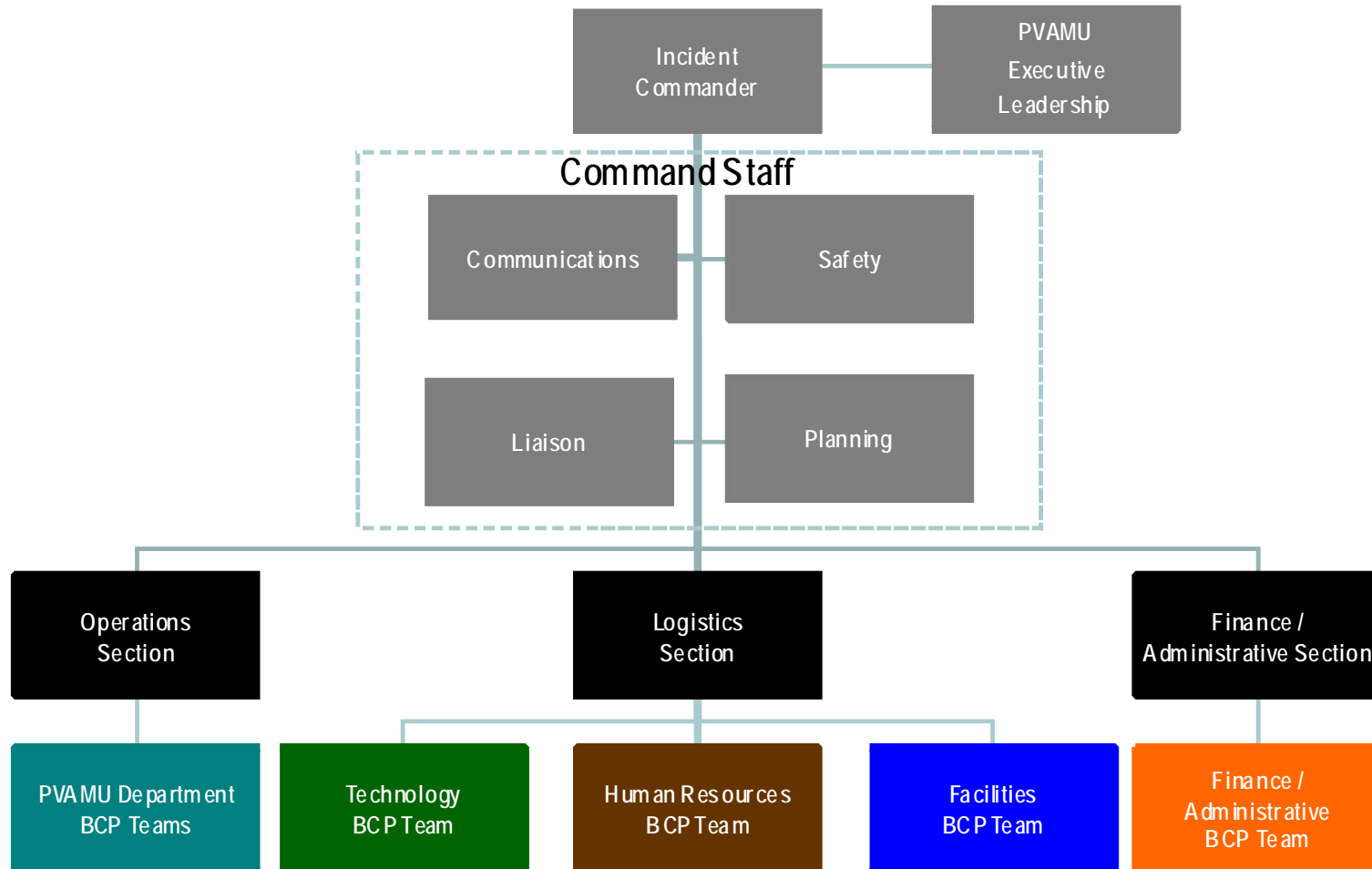
Major ICS Position	Primary Functions
<p>Public Information Officer</p>	<ul style="list-style-type: none"> • Determine, according to direction from IC, any limits on information release. • Develop accurate, accessible, and timely information for use in press/media briefings. • Obtain the IC’s approval of news releases. • Conduct periodic media briefings. • Arrange for tours and other interviews or briefings that may be required. • Monitor and forward media information that may be useful to incident planning. • Maintain current information summaries and/or displays on the incident. • Make information about the incident available to incident personnel. • Participate in Planning Meetings. • Implement methods to monitor rumor control.
<p>Safety Officer</p>	<ul style="list-style-type: none"> • Identify and mitigate hazardous situations. • Create a Safety Plan. • Ensure safety messages and briefings are made. • Exercise emergency authority to stop and prevent unsafe acts. • Review the IAP for safety implications. • Assign assistants qualified to evaluate special hazards. • Initiate preliminary investigation of accidents within the incident area. • Review and approve the Medical Plan. • Participate in Planning Meetings to address anticipated hazards associated with future operations.
<p>Liaison Officer</p>	<ul style="list-style-type: none"> • Act as a point of contact for Agency Representatives. • Maintain a list of assisting and cooperating agencies and Agency Representatives. • Assist in setting up and coordinating interagency contacts. • Monitor incident operations to identify current or potential inter-organizational problems. • Participate in Planning Meetings, providing current resource status, including limitations and capabilities of agency resources. • Provide PVAMU-specific demobilization information and requirements.

Major ICS Position	Primary Functions
<p>Operations Section Chief</p>	<ul style="list-style-type: none"> • Ensure safety of tactical operations. • Manage tactical operations. • Develop operations portions of the IAP. • Supervise execution of operations portions of the IAP. • Request additional resources to support tactical operations. • Approve release of resources from active operational assignments. • Make or approve expedient changes to the IAP. • Maintain close contact with the IC, subordinate Operations personnel, and other agencies involved in the incident.
<p>Planning Section Chief</p>	<ul style="list-style-type: none"> • Collect and manage all incident-relevant operational data. • Supervise preparation of the IAP. • Provide input to the IC and Operations in preparing the IAP. • Incorporate Traffic, Medical, and Communications Plans and other supporting material into the IAP. • Conduct/facilitate Planning Meetings. • Reassign out-of-service personnel within the ICS organization already on scene, as appropriate. • Compile and display incident status information. • Establish information requirements and reporting schedules for Units (e.g., Resources Unit, Situation Unit). • Determine need for specialized resources. • Assemble and disassemble Task Forces and Strike Teams not assigned to Operations. • Establish specialized data collection systems as necessary (e.g., weather). • Assemble information on alternative strategies. • Provide periodic predictions on incident potential. • Report significant changes in incident status. • Oversee preparation of the Demobilization Plan.

Major ICS Position	Primary Functions
<p>Logistics Section Chief</p>	<ul style="list-style-type: none"> • Provide all facilities, transportation, communications, supplies, equipment maintenance and fueling, food, and medical services for incident personnel, and all off-incident resources. • Manage all incident logistics. • Provide logistics input to the IAP. • Brief Logistics staff as needed. • Identify anticipated and known incident service and support requirements. • Request additional resources as needed. • Ensure and oversee development of Transportation, Medical, and Communications Plans as required. • Oversee demobilization
<p>Finance/Administration Section Chief</p>	<ul style="list-style-type: none"> • Manage all financial aspects of an incident. • Provide financial and cost analysis information as requested. • Ensure compensation and claims functions are being addressed relative to the incident. • Gather pertinent information from briefings with responsible agencies. • Develop an operational plan for the Finance/Administration Section and fill Section supply and support needs. • Determine the need to set up and operate an incident commissary. • Meet with assisting and cooperating Agency Representatives as needed. • Maintain daily contact with agency(s) headquarters on finance matters. • Ensure that personnel time records are completed accurately and transmitted to home agencies. • Ensure that all obligation documents initiated at the incident are properly prepared and completed. • Brief agency administrative personnel on all incident-related financial issues needing attention or follow-up. • Provide input to the IAP.

The recommended Business Continuity Team Chart is attached.

PVAMU Business Continuity Organization Chart



6.3 Business Continuity Plan Format

We recommend that PVAMU use a common format in preparing the actual detailed procedures and documenting other information. The Recovery Procedures Format is below. This will help assure that the plan follows a consistent format and facilitates ongoing maintenance of the Plan.

PVAMU Business Continuity Plan		CONFIDENTIAL	
Recovery Team Name		Section #	
#	Procedure Description	Responsible Party	Date/Time
	Plan Procedure Documentation: <ul style="list-style-type: none"> • Column 1 – Identifies the number of each procedure for easy reference. • Column 2 – Describes the procedure that should be completed when the BCP is activated. • Column 3 - Documents the person responsible for completing the procedure. • Column 4 - Identifies the date and time the procedure is completed. 		
1			
2			
3			
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11			
12			
13			
14			
15			

6.4 Business Continuity Plan Outline

A well-designed and organized continuity plan will directly affect the recovery capabilities of PVAMU. The contents of the Plan will follow a logical sequence and be written in a standard and understandable format. Effective documentation and procedures are extremely important in a Business Continuity Plan. Poorly written procedures can be extremely frustrating, difficult to use and become outdated quickly. Well-written plans reduce the time required to read and understand the procedures and, therefore, result in a better chance of success if the plan has to be used. Well-written plans are also brief and to the point. The detailed outline of the specific contents and scope of the Business Continuity Plan are included in Exhibit D.

SECTION SEVEN

Exhibits

SECTION SEVEN – EXHIBITS

This Section contains the following Exhibits:

- Exhibit A – Server Specifications
- Exhibit B – Alternate Work Locations
- Exhibit C – Minimum Resource Requirements
- Exhibit D – Business Continuity Plan Outline

Exhibit A – PVAMU Server Specifications

Application Name	Application Description	Server Name	Number of Processors	Processor Speed
Banner Production Database	University ERP System	pvbannerdb	4	1.5 Ghz
		pvinb01	1	1.5 Ghz
		pvssb01	4	1.53 Ghz
Banner Test Database	TEST ERP System	pvbantst	4	1.53 Ghz
		pvinbtst	4	1.5 Ghz
		pvssbtst	1	1.5 Ghz
		pvmgmt	1	1.5 Ghz
WebCT(BlackBoard) Production	E-Courses Applications	ecoursedb	4	1.6 Ghz
		ecourseapp	4	1.6 Ghz
WebCT(BlackBoard) Test	E-Courses Database	ecoursedev	1	1.1 Ghz
Appworx	Job Scheduler	pvrpt	4	1.53 Ghz
ODS/EDW Production	Operational Data Store/Enterprise Data Warehouse	pvods01	1	1.2 Ghz
ODS/EDW Test	Operational Data Store/Enterprise Data Warehouse	pvodstst	1	1.2 Ghz
Cognos Production	Reporting Solution	pvcog01	1	2.6 Ghz
		pvcog02	1	2.6 Ghz
Cognos Test		pvcogtst01	1	2.6 Ghz
		pvcogtst01	1	2.6 Ghz
Luminis Production	Portal Solution	pvlumn01	1	1.2 Ghz
		pvlumn01	1	1.2 Ghz
Luminis Test		pvlumntst01	1	1.2 Ghz
		pvlumntst02	1	1.2 Ghz

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
A.I. THOMAS (501)	Administration	34 Office	Clark (789) Library (744) Room 127	1 st Floor 10 Office 24 Desks	Library (744) Rm 209, 210A, 210B	34 desks 24 computers
WOOLFOLK (503)	Behavior & Political Science	21 Offices	Library (744) Rm 127	21 desks 2 computers	Library (744) Rm 126	21 desks 6 computers
WOOLFOLK (503)	Classrooms	WOOLFOLK (503) 103 104 109 110 203 204 207	NICKS – ARENA (669) SEC A B C D E F G	7 Rooms	508 - 309 689 – 1D141A 686 – 001A 686 – 001B 783 – 263A 783 – 263B 783 – 263C	7 Rooms
GILCHRIST (504)	Eng & Business Affairs	9 Offices	C.L. Wilson (704) 1 st Floor	9 desks	Library Rm 209	9 desks & computers
GILCHRIST (504)	Classrooms	Classes 104 109	689 - 1D138 689 - 1D141A	2 Rooms	504 - 209 676 - 108	2 Rooms
WELCOME CENTER (506)	Aux Services	3 Offices	Harrington Sci (668)	3 desks	MSC (779) Room 106	3 desks
W.R. BANKS (508)	Business Affairs, Math	117 Offices	Library (744) Rms 205, 206	117 desks	Library (744) Rooms 306, 307	117 desks
W.R. BANKS (508)	Classrooms	WR BANKS (508) 202 211 240 242 204 205 208 209	NICKS ARENA (669) SEC A SEC B SEC C SEC D SEC E SEC F SEC G SEC H	8 Rooms	689 – 1D138 761 – 102 686 – 001 761 – 103 689 – 1D141B 689 – 1D141A 783 – 263A 783 – 263B	8 rooms

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
VET CLINIC (517)	AG	1 Offices	Coop Ext. (761)	1 Office	AG Research (745)	1 Office
Pool (519)	Health * Human Performance	3 Offices	Nicks (669)	3 Offices	L. Moore (758)	3 Offices
PLANT WAREHOUSE (522)	Physical Plant	4 Offices	Plant Admin (674)	4 Offices	Transportation (523)	4 Office Spaces
TRANSPORATATION (523)	Physical Plant	3 Offices	Plant Admin (674)	3 Offices	Plant (674) Warehouse (522)	3 Office Spaces
SHOPS (525)	Physical Plant	5 Offices	Plant Admin (674)	5 Office spaces	Transportation (523) Warehouse	2 Offices 3 Offices
POWER PLANT (529)	Utilities	4 Offices	Physical Admin (674)	4 Offices	Wastewater Admin (734)	4 Office spaces
DREW (535)	Research & Institutional Research	20 Offices	Library (744) 210A & 210B	20 desks & computers	Library (744) Rm 126	20 desks 6 computers
HILLIARD (537)	Language & Communications	46 Offices	Library (744) Rooms 209, 212, 210a & 210B	46 desks & 40 computers	Library (744) Rooms 126 & 127	46 seats, 8 computers
HILLIARD (537)	Classrooms	HILLIARD (537) 121 123 124 126	NICKS ARENA (669) 761 – 102 761 – 103 686 – 001A 686 – 001B	4 ROOMS	742 – 304 789 – 137 676 – 108 790 – 123	4 rooms
ANDERSON (541)	Research, Academic Affairs	39 Offices	Library (744) Rooms 209, 212, 210 A & 210B	39 Desks & computers	Library (744) Rooms 126, 127	39 desks 8 computers
EVANS (544)	Student Affairs	41 Offices	Library (744) Rooms 209, 212, 210A & 210B	41 Desks & computers Office Spaces	Library (744) Rooms 126 & 127	41 desks 8 computers

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
MAY HALL (658)	AG	13 Offices	Ag Research (745)	13 Office Spaces	Coop Ext. (761)	13 Office Spaces
MAY HALL (658)	Classroom	113 115 119 125 127	689 – 1D139 689 – 1D138 508 – 309 689 – 1D141A 686 – 001	6 Rooms	NICKS (669) SEC A SEC B SEC C SEC D SEC E	6 Rooms
	Labs	118 (L)	517 - 111		783 – 113 (L)	
HARRINGTON SCIENCE (668)	Business Affairs & Solar Research & Med. Academy Aux Services	41 Offices	Library (744) Rooms 209, 212, 210A & 210B	41 desks & 40 computer	Library (744) Rooms 126, 127	41 Desks 8 computers
NICKS (669)	Health & Human Performance Athletics	8 Offices	L. Moore (758) Athl Admin (834)	4 Spaces 4 spaces	Owens- Franklin Basement	8 Office Spaces
NICKS (669)	Classroom	B123	689 - 1D141A	3 Rooms	789 – 257	3 Rooms
	Labs	119 (L) B114 (L)	217 – 108 742 - 304		783 – 133 689 – 1D138	
PLANT ADMIN (674)	Physical Plant	27 Offices	Library (744) Rooms 209, 210a & 210B	27 Desks & Computers	Library Room 126	27 Desks & 6 computers
NAVY (676)	Navy	12 Offices 2 classes 107 112	Army (686) 761 – 102 761 - 103	12 Office Spaces 2 Rooms	Library Room 111 517 – 108 742 - 304	12 Desk Spaces 2 Rooms
ARMY (686)	Army	10 Offices 1 classroom 110	Navy (676) 761 - 102	10 Office Spaces 1 Room	Owens- Franklin Basement 761 - 103	10 Desk Spaces 1 Room

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
FERRELL (687)	Aux Services	5 Office	MSC (779) 106,107	5 Office Spaces	Owens- Franklin Basement (688)	5 Offices
OWENS-FRANKLIN (688)	Aux Services	41 Offices	Library 209, 212, 210A & 210B	41 Desks & Computers	Library 126, 127 109	41 Desks & 8 computers Clinic Area
HOBART TAYLOR (689)	Business Music & Drama	70 Offices	Library (744) Rooms 126 & 127. 111	70 Desk Spaces 8 Computers	Library (744) Rooms 205 & 206	70 Desk Spaces
HOBART TAYLOR (689)	Classrooms	Classrooms	NICKS (669)	13 Rooms		13 Rooms
		1A110	SEC A		686 – 001	
		1C129	SEC B		508 – 309	
		1E146	SEC C		783 – 133A	
		1G161	SEC D		783 – 133B	
		2B209	SEC E		689 –	
		2B210	SEC F		1D141B1	
		2B215	SEC G		689 –	
		2B216	SEC H		1D141B2	
		2G254	SEC I		783 – 263A	
		2G256	SEC J		783 – 263B	
					783 – 263C	
					761 – 102	
	Labs	Labs	Labs		669 – SEC A	
		2B219 (L)	704 – 101		669 – SEC B	
		2B220 (L)	508 – 210A		669 – SEC C	
		2B221 (L)	508 – 210B			
C.L. WILSON (704)	Engineering	30 Offices	S.R. Collins (743) E.E. Bldg (743)	30 Office Spaces	Library (744) Room 127	30 Desks spaces & 2 computers

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
C.L. WILSON (704)	Classrooms Labs	Classrooms 103 109K Labs 106A 109A 109F 109J	761 – 103 761 – 104 743 – 220 783 – 223 789 – 252A 789 – 252B	6 Rooms	674 – 111 789 – 137 508 – 210A 508 – 210B 508 – 210C 508 – 210D	6 rooms
DE LA GARZA (707)	AG Research	12 Offices	AG Research (745)	12 Office Spaces	Coop Ext. (761)	12 Office Spaces
MEAT GOAT (713)	AG Research	1 Office	De La Garza (707)	1 Office	AG Research (745)	1 Office
GOAT REPRO (714) Goat Nutrition (715) Goat Yearling (716) Goat Mat (717)	AG Research	1 Office Each Bldg	De La Garza (707)	1 Office	AG Research (715)	1 Office
CENTRAL RECEIVING (727)	Police & Central Receiving	13 Offices	Physical Plant Admin (674) Owens- Franklin Basement	2 Offices 11 Offices	Transportation (523) Ferrell Hall (687) Waste Water Admin (734)	2 Offices 5 Office Spaces 6 Office Spaces
SEWAGE CONTROL (734)	Physical Pant	4 Offices	Physical Plant Admin (674)	4 Offices	Ferrell Hall (687)	4 Office Spaces
UTILITY ANNEX (739)	Utility	1 Offices	Physical Plant Admin (674)	1 Office	Transportation (523)	1 Office
CHAPEL (741)	Student Activities	4 Offices	MSC (779) (2 nd Floor)	4 Offices	Library (744) Room 212	4 Desks & computers

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
DELCO (742)	Education	85 Offices	Library (744) Rooms 126, 127, 111, 209	85 Office Spaces & 10 computers	Library (744) Rooms 205, 206	85 Desks spaces
DELCO (742)	Classrooms	Classrooms 241 242 243 308 327 328 329 330	NICKS (669) SEC A SEC B SEC C SEC D SEC E SEC F SEC G SEC H	10 Rooms	686 – 001A 686 – 001B 761 – 104 741 – 126 789 – 155A 789 – 115B 789 – 155C 789 – 15D	10 rooms
	Labs	Labs 217 305	Labs 704 – 101 704 – 109B		508 – 210A (L) 508 – 210B (L)	
S.R. COLLINS (743)	Engineering	72 Offices	Library (744) Rooms 111, 126, 127, 209	72 Office Spaces & 10 computers	Library (744) Rooms 205, 206	72 Desk spaces
S.R. COLLINS (743)	Classrooms	116 331 224	501 – 114A 501 – 114B 501 – 114C	15 Rooms	744 – 108 790 – 123 790 – 106	15 Rooms
	Labs	114 204 205 207 208 209 210 211 218 222 223 226	742 – 332 744 – 210A 704 – 202 744 – 210B 783 – 223 704 – 101 704 – 106 508 – 210A 537 – 144 508 – 210B 742 – 321 704 – 109B		NICKS (669) SEC A SEC B SEC C SEC D SEC E SEC F SEC G SEC H SEC I SEC J SEC K SEC L	

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
Library (744)	Library	46 Offices	W.R. Banks (508) Anderson Hall (541) Owens-Franklin Basement (688) JJ (789) EE (793)	5 Offices 5 Offices 20 Offices 5 Offices 11 Offices	Look at Vacant 230 Labs	46 Spaces
AG Research (745)	AG Research	47 Offices	Library (744) Rooms 207, 212, 210A, 210B	47 Spaces & 40 computers	Library (744) 126 & 127	47 Spaces & 8 computers
Hay Barn (746) SWINE FARROWING (747) Lab Processing (752) Feed Mill (753)	AG Research AG Research AG Research AG Research	1 Office 1 Office 3 Offices 1 Office	De La Garza (707)	6 Offices	AG Research Bldg. (745)	6 Offices
L. MOORE (758)	Health & Human Performance	9 Offices	Owens-Franklin Basement (688)	9 Offices	Nicks (669) Delco (742)	9 Offices
L. MOORE (758)	Classroom Labs	010 132	508 – 210 676 – 108	2 Rooms	745 – 015 790 – 123 (L)	2 Rooms
COOP EXT. (761)	AG	33 Offices	Library 744) Rooms 209, 212, 210A, 210B	33 Offices Space & computers	Library (744) Room 127	33 desks Spaces & computers

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
MSC (779)	Aux Serv. Student Act. Financial Aid Registrar	80 Offices	Library (744) Rooms 111, 126, 127, 209, 212, 210A, 210B	80 Office spaces & 10 computers	Library (744) Rooms 205, 206	80 desk spaces
N. KENNEDY (783)	Architecture Business	45 Offices	Library (744) 111, 209, 212, 210A, 210B	45 Office Spaces & computers	Library (744) Rooms 126, 127	45 desk spaces & 8 computers
N. KENNEDY (783)	Classrooms	227 231 232 233 115	508 – 309A 508 – 309B 689 – 1D141A1 689 – 1D141A2 686 - 001	5 Rooms	789 – 137 674 – 111 676 – 108 790 – 123 789 - 257	5 Rooms
D. CLARK (789)	Juvenile Justice	60 Offices	Library (744) Rooms 209, 212, 210A, 210B	60 desks spaces & 40 computers	Library (744) 205 & 206	60 desk spaces
D. CLARK (789)	Classrooms	235 236 336 340 341 362 363 364 365 240	NICKS (669) SEC A SEC B SEC C SEC D SEC E SEC F SEC G SEC H SEC I SEC J	10 Rooms	686 – 001 689 – 1D141B 501 – 114A 501 – 114B 501 – 114C 501 – 114D 779 – 222A 779 – 222B 779 – 222C 783 – 263	10 Rooms

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
E.E. O'BANION (790)	Chemistry Biology Physics Med. Academy	62 Offices	Library (744) Rooms 209, 212, 210A, 210B & 127	62 desk spaces & 40 computers	Library (744) Rooms 205 & 206	62 desk spaces
E.E. O'BANION (790)	Classrooms	101 103 104 122 A101 A103 A104	NICKS (669) SEC A SEC B SEC C SEC D SEC E SEC F SEC G	31 Rooms	789 – 155A 789 – 155B 789 – 155C 761 – 100A 783 – 263 761 – 100B 761 – 100C	31 Rooms
	Labs	105 201 205 209 212 214 216 217 218 221 301 303 307 308 309 311 313 315 320 323 402	NICKS (669) SEC H1 SEC H2 SEC H3 SEC H4 SEC H5 SEC I1 SEC I2 SEC I3 SEC I4 SEC I5 SEC J1 SEC J2 SEC J3 SEC J4 SEC J5 SEC K1 SEC K2 SEC K3 SEC K4 SEC K5 SEC L1		779 – 111 SEC 1 SEC 2 SEC 3 SEC 4 SEC 5 SEC 6 SEC 7 SEC 8 SEC 9 SEC 10 SEC 11 SEC 12 SEC 13 SEC 14 SEC 15 SEC 16 SEC 17 SEC 18 SEC 19 SEC 20	

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
NURSING (833)	Classrooms	959	779 – 111	17 Rooms	NICKS (669)	17 Rooms
		962	SEC 1		SEC A1	
		964	SEC 2		SEC A2	
		966	SEC 3		SEC B1	
		1004	SEC 4		SEC B2	
		1006	SEC 5		SEC C1	
		1032	SEC 6		SEC C2	
		1104	SEC 7		SEC D1	
		1106	SEC 8		SEC D2	
		1191	SEC 9		SEC E1	
		SEC 10		SEC E2		
	Labs	979	SEC 11		SEC F1 (L)	
		1082	SEC 12		SEC F2 (L)	
		1086	SEC 13		SEC G1 (L)	
		1132	SEC 14		SEC G2 (L)	
		1136	SEC 15		SEC H1 (L)	
		1082A	SEC 16		SEC H2 (L)	
1089A		SEC 17		SEC I1 (L)		
NW CENTER (845)	Admin Offices Business Offices	23 Offices	Library (744) Rooms 209, 212, 210A, 210B	23 desks & 23 computers	Library (744) Room 127	23 desk spaces

Exhibit B – Alternate Location Form

Building/Department			First Alternative Location		Second Alternative Location	
Building Floor	Department	Space Needs	Building/Floor	Space Available	Building/Floor	Space Available
NW CENTER (845)	Classrooms	105	779 – 111 SEC 1	22 Rooms	NICKS (669) SEC A1	22 Rooms
		107	SEC 2		A2	
		108	SEC 3		B1	
		110	SEC 4		B2	
		123	SEC 5		C1	
		203	SEC 6		C2	
		204	SEC 7		D1	
		205	SEC 8		D2	
		206	SEC 9		E1	
		207	SEC 10		E2	
		208	SEC 11		F1	
		209	SEC 12		F2	
		212	SEC 13		G1	
		213	SEC 14		G2	
		214	SEC 15		H1	
		215	SEC 16		H2	
		216	SEC 17		I1	
		217	SEC 18		I2	
		221	SEC 19		J1	
		222	SEC 20		J2	
		223	SEC 21		K1	
		224	SEC 22		K2	

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Administration & Auxiliary Services									
Auxiliary Enterprises									
• Campus Mail & Call Center (operator)									
		Postage machine	1	Envelopes	2 boxes of different sizes	Contact Listing		Staff (For mail and call center)	8
		Insertor (fold paper into envelopes)	1	Special Mailing Envelopes (express)	100			Due to higher call volume and the efficiency of manual mail operations staffing would actually need to increase.	
		Arrival System (bar coding system)	2	Special Mailing Envelopes (priority)	100				
		Shelving for separating mail	1						
		Golf Cart or other means to deliver mail	1						
• Housing									
		Computers	3			American Campus Reports		Manager	1
		Desks	3					Staff	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Phone	3						
• ID Cards, Laundry and Meal Service									
CS Gold Servers	3	ID Camera	3	PVC Cards	4 boxes			Staff Assistant	1
		Data Card Printer	3	Printer Ribbon	20 boxes			Manager	1
		Computers	3	Printer cleaning kits	10 packs			Assistant VP	1
		Fax	1						
		Scanner	1						
• Parking									
		PC's	3				Archive records	Supervisor of Parking Management	1
Recon (hand held citation / ticket writers)	4	Copier	1					Staff Assistant	1
		Printer	1					Clerk 1	1
		Recon printer	4					Parking Attendants	2
		Telephones	3						
		Nextel Phones	2						
• Radio Station									
Telephone	1	Antenna	3			Contracts	Employee Files	Manager	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Fax	1	Broadcast Studio Equipment	1			Procurement	Computer Back-Up Disk	Program Director	1
Electricity		Computers	4				Sensitive Information	Announcers	1
A/C	2	Transmitter	1						
Mail									
Broadcast Electronics 703									
Dielectric 3 Bay									
Dielectric Motorized Coaxial Switch									
Orban 8500 HD									
• Student Center									
		Computers	2	Supplies for Maintenance staff		Contracts with Bookstore		Manager	1
		Desks	2					Staff	1
		Phone	2						
Health Services and Student Counseling									
Computers	2	Radios	25	First Aid Kits	4	Police Reports	Reports	Police Officers	16
Department Public Safety									
Medicat		All equipment necessary		Hospital Supplies		Listing of current enrolled students		X-Ray	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
PC	10					FORMS:		Physician	1
Phone line	12					Forms Patient Consent		Practitioner	1
						Progress Note		RN	2
						Intake		IS/QA	1
						Patient Check-Out		Appt (Front Desk)	2
						Order Forms		Admin Asst	1
						Referrals		Custodian	1
						Prescriptions		Counselor	1
								Administrator	1
								Health Information Coordinator	1
Division of Business Affairs									
Campus Planning & Space Management									
Computer	3	desk	3	Paper	Ream	Access to THECB Files	THECB Files	Office employees	3
Internet	1						Banner (Software System)		
Phone	3								
Environmental Health & Safety									
Laptop	2	More then covered by BCP		More then covered by BCP				EHS	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Financial Accounting, Reporting & Procurement									
• Financial Accounting									
Internet		Computer	3	Paper	1 box	Access to internet	Documents of original entry	Manager	1
Network		Telephone	2	Pens	1 box	Invoices		Accountants	1
		Printer/Copier	1	Calculator tape	2 boxes	Vouchers		Data Entry Specialist	1
		Calculator	3	White-out	5	Receipts			
				Rulers	5	Files maintained Network			
				Scotch tape	5				
				Stapler	5				
				Staples	1 box				
				Highlighters	1 box				
				Folders	2 boxes				
				Hole puncher	1				
				Brackets	1 box				
• Fixed Assets									
Internet		Computers	5	General Office Supplies		Purchase Orders	N/A	Manager	1
Network		Telephones	3			Vouchers		Warehouse Supervisor	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Web Based Inventory		Printers	3			Inventory Files		Warehouse Assistant	1
		Inventory Scanners	3						
<ul style="list-style-type: none"> • Procurement and Contracts 									
Internet		Computer	3	Ink Cartridges	8	Purchase Order Forms	Vendor Listing/ Contact Info	Manager	1
Network		Desks	3	Paper	2 cases	Bid Forms	Internal Contact Information (Department)	Supervisor	1
MS Office		Phones	3	Pens	2 boxes	Contract Checklist	Contact Information for other PVAMU Depts	Specialist	1
		Fax Machine	1	Staples	2 boxes	Internal Procedures			
		Printer/Copier/Scanner	3	Tape	6 rolls				
		Typewriter	2	File Folders	100				
				Markers	1 box				

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Financial Services									
• Accounts Payable (Accts Payable/ Travel/Procard)									
▪ Accounts Payable									
Internet Access		PC	2			Invoices/Purchase Orders/ Contracts	VIN or ID Numbers	Clerk	1
		Copier/fax	1			Calling List		Supervisor	1
		Printer	1			Manual Payment Vouchers			
		Adding machine	2						
		Telephone	2						
▪ Travel									
Internet Access		PC	2			Travel forms	Credit Cards	Clerk	1
		Copier/fax	1			Calling Lists		Supervisor	1
		Printer	1						
		Adding machine	2						
		Telephone	2						
▪ Procard									
Internet Access		PC	2			Expense Reports	Credit Cards	Staff	2
		Calculator	2			Receipts			
		Printer	1			Calling List			
		Copier	1						
		Telephone	1						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
• Communications Center (info distribution)									
Internet	2	Computers	2	Envelopes	Approx. 500 ltr. size and 1000 10"x14" size envelopes	University Brochures		Staff Assistants	1
		Phones	2	Paper				Comm Specialist	1
• Enrollment Management									
Leave Traq	1	Computer	1	General Office supplies			Personnel Files	Manager	1
Banner		Printer	1	Letterhead					
Time Traq	1	Fax	1	Printer paper					
		Scanner	1						
		Telephone	1						
• Office of the Registrar									
Banner	1	Desk Top Compu	13	Copier Paper	4 boxes per week	Req/Invoice	Student records	Staff Assistants	4
DocuWare	1	Printers	8	Trancript Stock	5,000 sheets per week			Transcript Clerks	2
SIS	1	Scanners	3	Diploma Stock	800 sheets per semester			Adm. Asst.	1
Microsoft Office	1	Copiers	3	Diploma Covers	800 per semester			Assoc/Asst. Registrar	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Adobe	1	Fax Machine	2	Diploma Mailers	800 per semester			Data Manager/ Analyst	1
FAMIS	1	Telephone	13	Various Envelopes	7,000 per semester			Student Worker	1
Canopy	1	Lap Top Compu	4	Writing utensils	20 doz. Per semester			Registrar	1
Parature	1	Time Date Stamp	2	File folders	200 per semester				
Scrip-Safe	1			Print Cartridges	20 per semester				
TimeTraq	1			Tablets/Note Pads/Binders	50 per semester				
				Other					
• Payroll									
BPP/FAMIS	3	Telephone	2					Supervisor	1
SSO	3	Computers	3					Staff	2
E-MAIL	3	Fax Machine	1						
Internet access	3	Calculator	3						
		Printers	3						
		Copier							
• Recruitment and Marketing									
Internet	6	Computers	6	Office supplies	6			Asst. Director	1
Banner	6	Telephones	6					Senior Recruiter	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Copier	1					Staff Assistant	1
		Fax	1					University Recruiter	2
		Scanner	1						
		Laptop computers	4						
<ul style="list-style-type: none"> Treasury Services 									
Computers	6	Point of Sale Device	1	Paper	1000 sheets			Cashier	2
Printers	4	Calculator	6	Pens	5			Accountant	2
Telephone	3	copier	1	Calculator tape	2				
Computers will need to have TouchNet software for Cashiering added		Fax	1	White-out	2				
				Rulers	2				
				Scotch tape	1				
				Stapler	1				
				Staples	1 box				
				Receipts	1000				
				Check stock	2000				
				Cash	3,000				

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Information Technology									
• ITS									
Banner	1	PC	22	Paper	5000	Process Manuals		CIO	1
Cisco	1	Laptops	7	Tonner	4			Directors	3
Exchange	1	Servers	111	Batteries	50			Managers	2
AD	1	Phones	22					NW Specialist	2
MS Windows	22	Cell Phones	22					User Liaison	3
MS Office	22	Mobile wireless	3					Desktop Support	5
Internet access	22							System Admins	2
								Admin Assistant	1
								Computer Operator	1
• Webmaster & Phone Service (VoIP & Web)									
Computer	2			Wireless air cards	2		VoIP Billing Records	Web Content Specialist & Staff Accountant	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Office of Budgets and Reconciliations									
Internet		Computer	7	Pens	10		Approved Departmental Budget Submissions	Budget Specialist	2
Network		Telephone	7	Paper	1 Box		Budget Approved Scholarships & IDOs	Budget Supervisor	1
Microsoft Office		Copier	1	Calculator	7		Approved (BVD) Monthly Payroll Certification	Budget/ Reconciliation Director	1
Windows		Printer	3					Reconciliation Specialist	2
		Fax Machine	1					Reconciliation Supervisor	1
Office of Compliance									
Network	2	Computers & Telephone	2			Template for spot reviews (Checklist Form)	Completed Spot Reviews Checklist	Professional Staff	2
							Final Reports for Spot Reviews (TAMUS)		
						MSA (Monthly Statement of Account) Template	Completed MSA Checklist		

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
							Final Report MSA (Completed in Word)		
							Other Final Reports (Completed in Word)		
Office of Human Resources									
• Benefits									
Internet		Telephone	1			Standard Operating Procedures	Benefit records kept for each employee in HR	Employee Benefits Associate	2
		Computer	1						
		Printer	1						
• Compensation									
Internet		Telephone	1	Paper				HR Specialist	1
		Computer	1					AVP HR	1
		Printer	1	Printer Ink					
• Employee Services									
Internet connection	1	Personal Computer or laptop	1	Flash drive, external hard drive	3 - 5			Employment Analyst	1
Working phone line	1	Telephone	1	Phone cord, handset, etc.	1			HR Records Specialist	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
				Hard Copy Applications	100+				
				Pens, pencils, paper, etc.	Reasonable amt.				
• Immigration Services									
Computation	1	Computer	1					Immigration Service Associate	1
Communication	1	Telephone	1					Assistant Vice President	1
Internet Broadband Access	1								
• Leave									
Computation	1	Computer		Paper				Employee Benefits Associates	2
Communication	1	Telephone							
Internet	1	Computer							
• Records Management									
Internet		Computer	1					Records Management Specialist	1
								Employee Analyst	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
• Student Employment									
Internet		Computer/Laptop	2	Jump Drive	1	Bi-Weekly Earnings Reports		SEO Employment Analyst	1
Access to System Programs		Phone	1			SEO Spreadsheet		SEO Manager	1
• Training									
Computers	20	Projector	1	Printer paper	40 reams			Training Specialist	1
		Screen	1					Employee Services Associates	2
		Projector clicker	1						
		Printer	1						
Office of Institutional Research									
Phone	1	Computers	3	Paper	1 box	THECB Handbook (Online)	Fact Books	Director	1
Network connection	1	Printer	1	Standard supplies (pens, stapler, hole punch, staple remover, etc.)	1		THECB Reports	Assistant Director	1
		Scanner	1				Student Opinion Survey information	Research Assistant	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
							Grade Statistics		
							Academic Program Experience		
Office of Project Manager & Info Security									
		Computers	2	General office supplies				Proj Mgr and Info Security Officer	1
		Telephone	2					Info Resource Associate	1
		Copier	1						
		Printer	1						
Physical Plant									
• Campus Maintenance									
▪ Grounds									
Computers	10	Phone	4	Office Supplies	small	Work Orders	Chemical App.	Director	1
Controllers	28	Calculators	4	Grounds Supp.	small	Administrative		Staff Assistant	1
		Printers	4	Equipment Parts	small			Student	1
		Copiers	1					Foremen	4
		Radios	10					Chemical Applicator	2
		Trucks	6					Equip. Operator	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Tractors	3					Grounds Keepers	15
		Mowers	11					Temps	5
		Edger's	4						
		Blowers	6						
		Trailors	2						
		Back Hoe	1						
		String Trimmers	5						
		Vans	2						
		Chain-Saws	6						
		Hedge Trimmers	4						
		Pruning Poles	3						
		Grounds Tools	Various						
		Field Paint Sprayer	2						
		Chemical Sprayer	1						
<ul style="list-style-type: none"> ▪ Transportation 									
Computers	1	Phone	4	Office Supplies	small	Work Orders	Fleet Reports	Director	1
TAVIS	1	Calculators	3	Shop Supp.	small	Administrative		Staff Assistant	1
Diag. Scanner	1	Printers	3	Equipment Parts	small			Automotive Mech. II	1
		Copiers	1					Automotive Mech.	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Vehicle Lifts	3					Student Worker	1
		Fleet Vehicles	2						
		Fuel Pumps	2						
		AST	3						
• Central Utilities									
Internet		Computer	4	Ribbons	10	Employee Time	Employee Time	Non- Classified	10
Campus Network		Typewriter	1	Paper and Ink	10	Leaves	Leaves	Classified	2
FAMIS		Telephone	4	Pencils and Pens	20	Utility Usage	Utility Usage		
Canopy		2-Way Radio	12	Stapler	1	Purchases	Purchases		
PV PAWS		Copier	1	Note Books	10	Invoices	Invoices		
Leave Track		Scanner	1			Maintenance Records	Maintenance Records		
HR Connect		Printer	1			Operating Logs	Operating Logs		
Metasys									
Sprocket									
Wonder Ware									
• Construction & Planning									
Network	1	Computer	7	Paper	box	Records	Financials	Non Classified	4
Internet	9	Desk Copier	7	Tablet	pack	Forms	Payrolls	Classified	3
Outlook	9	Large Copier	2	Pens	box	Letters	Bids		

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Land line services	13	Format Copier	1	Pencils	box	Drawings	Bid Evaluation		
Cell services	2	Scanner	1	White Out	box	Contracts	Drawings		
2-way service	2	Plotter	1	Scale	5	Specifications			
Transportation	2	Telephone	7	Templates	few	Bids			
Software	7	Cell Phone	2	Counters	1	Evaluations			
		2-Way	2	Book	many	Reports			
		Binder	1	Binders	box	Copies			
		Cart	2	Tape Measure	5				
		Truck		Tape	box				
		Laptop	2	Mask	box				
		Adding Machines	5	Footwear	2 each				
		Calculator	3	Hats	7				
		Tester	7	Safety Glasses	21				
		Fax Machine	1	First Aid Kit	1				
		Camera	2	Staples	box				
		Desk	5	Staple Holders	7				
		Chairs	5	Paper Clips	5 boxes				
		Tables	3	Markers	5 set				
				Cartridges	box				

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
				Toner	box				
				File Cabinets	13				
				Raingear	5				
<ul style="list-style-type: none"> • Facility Maintenance (Custodial/Building) 									
Network	1	Computer	6	Paper and Ink	10			Non Classified	8
Internet	1	Typewriter	2	Ribbons	2			Classified	2
Nextel Direct Connect Phones	8	Telephone	6	Custodial Supplies	1 set				
		2-Way Radio	8	Maintenance supplies & tools	2 sets				
		Copier	1	Paper and Ink	10				
		Scanner	1						
		Vehicles	2						
Undergraduate Admissions									
		Computers	4	Letterhead			Student records	Freshmen counselor	1
		Network Printer	1	Envelopes			VA records	Transfer counselor	1
		Fax	1	General Office supplies				Admin Assistant	1
		Copier	1	Copier / fax paper				Staff Assistant	1
		Telephones	4						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Fireproof cabinets	2						
Office of the President									
Office of the President/Special Events									
		PC	2	General office supplies			Legal documents	President	1
		MAC	2	Letterhead	1 ream			Executive Assistant	1
		Printer	1	Notary	1			Staff	2
		Copier	1						
		Fax	1						
		Scanner	1						
Athletic Department									
		Computers	14					Staff	14
		Fax Machine	1					Lab-Students	11
		Copier/scanner	1						
		Telephones	14						
		Computers	11						
Athletic Director									
						Team Roster		Athletic Staff	10
						Squad List			
						Eligibility Documents			

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
						Practice Logs			
Athletic Compliance									
		Computers	2	General Office Supplies				Director of Athletic Compliance	1
		Printer	1					Athletic Compliance Officer	1
		Fax	1						
		Copier	1						
		Telephones	2						
Provost & Academic Affairs									
Center for Teaching Excellence									
Internet	1	Computer (PC)	2	Paper	5 cases		Equipment Logs	Director	1
Smart Training Room	1	Laptops	10	Toner	5		Service Logs	Learning Resource Specialist	1
		LCD Projectors	10				Custody Cards		
		TV/VCR/DVD	5	CD's	50				
		Copier (B/W)	1	DVD's	50				
		Copier (Color)	1	Resource Books	25				
		Telephone	2						
		Fax	1						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Disc Maker	1						
		DVD Recorder	1						
College of Agriculture & Human Sciences									
• Cooperative Agriculture Research Center									
Software	30	Computers	30	Paper	100		Student and Personnel records	Professional	2
		LCD Projectors	8	Pencils	50			Faculty	20
				Pens	50			Administrative	3
				Typewriter	3				
				Sticky Notes	100				
				Note Pads	50				
• Cooperative Extension Program									
Computer	5	Copier	1	Printer Cartridge	4	N/A	Accounts	Director	1
Printer	1	Cell Phone	1	Paper	5		Personal Records	Fiscal/ Operations/ IT Staff/Support Staff	4
College Arts & Sciences									
• Architecture									
Computer		Laptop	15				Student Files	Staff	22
		Desktop	75				Student Academic Files		

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
							Faculty Records		
Printing/Plotting		Printer	15				Course Records		
		Plotter	4				Vital Projects (student projects for accreditations)		
Network Server		File Server	1						
		S/W Server	1						
		Print Server	1						
Laser Cutter		Laser	1						
Scanner		Doc Scanner	3						
		Photo Scanner	3						
		Slide Scanner	1						
Projector		Projector	10						
<ul style="list-style-type: none"> • Army ROTC 									
Computer	3	Copier	1	Paper	1 box		Accounting records	Human Resources Technician	1
		Fax	1	Pens, pencils, misc. office supplies				Supply Technician	1
		Phones	4					Operations Officer/NCO	1
								PMS	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
								Military Science instructors	4
• Biology									
Desktop computers	33	Vortexor	8	Test Tubes	500	Registration	Payroll Contracts	Faculty	7
Laptop computers	16	Compound Microscopes	128	Lab Glassware Sets	64	Budget	Faculty Grades	Staff	2
Printers	5	Phase Contrast Microscopes	64	Test Tube Racks	64	Scholarship	Student Contact Information		
Smart board	2	Dissecting Microscopes	64	Petri Dish	1000	Purchases			
Cell counters	8	Electrophoresis Units	64	Gloves	24 boxes	Warranties			
Centrifuge	6	PCR units	16	Aprons	12 boxes	Service Contracts			
DNA Sequencer	1	LCD projectors	16	Dogfish	16	Vendor Listing			
phones	12	Scales	64	Cats	16				
Copier	1	Autoclave	2	Protist Samples	16				
		Refrigerators	8	Laboratory Kits	40				
		Chemical Hoods	4	Bacteria	6 boxes				
		Biohoods	4	Agar	6 pkg				
		Bunsun Burners	64	Broth	6 pkg				

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Broken Glass Disposal	4	Stain Sets	16				
		Biohazard Disposal	4	Adjustable Pipettes/Tip	64				
		White Boards	4	Agarose	6 pkg				
		Learning Models (Hearts, Brain, Muscular System, Vascular system, articulated skeletons, disarticulated skeletons, digestive systems, reproductive systems, respiratory systems, urinary system, Nervous system)	32 each	Methanol	10 bottles				
		Media Shaker	16	Ethanol	10 bottles				
		Incubators	8	Acetone	10 bottles				
		Hotplates	32	Chloroform	1 bottle				
		Waterbaths	4	Pens/Pencil	5 boxes				
		Dissecting Kits	32 each	White Paper	30 boxes				
		Holding Treys	32 each	Color Paper	20 boxes				

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Watering Bottles		Cuvettes	12 each				
		Biopac Systems	16 each	File Folder	10 boxes				
		Freezer rack	32 each	Wash Bottles	64 bottles				
		PCR workstation	2	Media Bottles	64 bottles				
		Water Purifier	1	Isopropanol	10 bottles				
		Bench Top Centrifuge	1	Microcentrifuge tubes	4 boxes				
		Nitrogen Tank	1	Cover slips	15 boxes				
		PH meters	32	Transfer Pipette	5 boxes				
		Walkin cooler	2	Microscope Slides	5 boxes				
		Sub low cooler	1						
		Portable DVD/VCR	2						
		Pasco system	16 each						
		Portable laboratories for 32 students	8						
		Spectrophotometers	12						
		Nanodrop	1						
		Rat cages/ racks	6 racks						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
• Chemistry									
Computers	5	NMR (Nuclear Magnetic Resonance)	1	laboratory supplies			Faculty files	Faculty	5
Phones	4	FTIR (infrared)	1				Students Record (Class Listings)	Staff	2
Printer/fax	2	GC (Gas Chromatography)	1				Grades		
Copier-Large	1	HPLC (Liquid Chromatography)	1						
		UV VIS	1						
		Balances	4						
• College of Business									
Overhead Projectors	11	Surge Protectors	83	Pens	200	Students Records	Student Information	Administrative Assistant	5
Staff Computers	12	Speakers	10	Pencils	200		Financial Account Information	Recruiter	1
Faculty Computers	35	Telephones	47	Paper for faculty/staff	15 cases			Professional Advisor	1
Student Use Computers	120	Scanners	3	Paper for Students	30 cases			Systems Analyst	1
Network Printers	6	Document Reader	12	Printer Ink for network printers	12			Assistant to the Dean for Development	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Faculty Printers	48	Scantron reader	1	Printer ink for faculty/staff	96			Department Head	3
Copiers	2							Dean	1
Fax Machine	3							Faculty	35
Server	3								
• Language & Communications									
Computer	15	Lab (Student) Computers	15			Student Listing		Teacher (Staff)	15
Phones	15								
Copier/Printer	3								
Internet									
• Mathematics									
Internet Service	18	Computer	18	Pens	18	Class Schedule	Faculty and Staff Information	Department Head	1
Telephone Line	18	Printer	2	Paper	12 cases	Class Assignments	Class Rolls	Admn. Asst.	1
		Telephone	18	Markers	4 dozen	Syllabus	Grades	Admn. Sec.	1
				Chalk	2 dozen	Grades			
• Music & Drama									
Computers	14	White Boards	3	Power Cords	8		Music and Scores	Dept Head	1
Telephones	14	Speakers	3 sets	Outlet Strips	6			Faculty	14
White Boards	14	Band Instruments		Extension Cords	6			Staff	3

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Projector	2	AV Carts	3	Band Instruments	Many			Custodial	2
Hard Drives	10	Computer Speakers	6						
Printers	2	Pianos	8						
CD Players	3	MIDI Keyboards	14						
DVD Players	5								
Laptop Computers	5								
MAC Computers (desktop and 2 laptop)	11								
Finale and Practical Musica software (MAC)									
• Navy ROTC									
		Computers	4			Calling Tree		Staff	4
		Telephones	4			Student Records			
• Physics									
Computers	6	Copiers	1	Paper	4 boxes	Books, Lecture Notes		Administrative	1
Projectors	5	Fax	1	Markers/ Erasers	8 boxes	Student Rosters		Instructional Support	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
External Hard Drives	6	Screens	4			Time Sheets Forms		Faculty	4
		White Boards	4			Sign in Sheet			
• Social Work, Behavior & Political Science									
Telephones	10	Computers	10	Heavy Duty Trash Bags	100			Dept. Head	1
Network Access	11	Heavy Duty Printer/copier/scanner	1					Director	1
								Coordinators	6
								Staff	1-3
• Solar Observatory									
Computers	5	Solar Observation telescope system	1			Manuals for each system	Data system	Researchers	3
		Power Supplies				Reference materials	Computer software	Staff	1
		Plasma Experiment system							
		Chilled Water Supply					Labview& IDL software's, Data Collection		
		Measurement System							
		Control System							

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Vacuum Pumps							
		Vacuum Chamber							
		Capacity Banks							
		Pneumatic System							
		Charging Units							
College of Education									
• COE Student Teaching & Field Experience									
		Computer	2	General office supplies			Student Teacher Internship application	Department Head	1
		Printer	1					Senior Secretary	1
		Fax	1						
		Telephones	2						
• Curriculum & Instruction-Faculty & Admin Services									
Internet	15	Computers	15	Copy Paper	50 reams	Paper records, USB drive, Banner, e-Courses, TrueOutcomes	Registrar	Department Head, faculty, staff	1 DH, 7 faculty, 1 secretary
• Dept Kinesiology & Allied Health Sciences-Clerical									
		Computers	2	General Offices				Admin secretary	1
		Printer	1	Date Stamp				Secretary	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Copiers	1						
		Telephones	1						
• Dept Kinesiology & Allied Health Sciences-Faculty									
Internet	all	Computers	30	Copy paper	50 reams			Health Faculty	8
		Telephones		File cabinet				Kinesiology	11
		Blackberries							
		Printer / Scanner							
		Fax							
• Teacher Certification									
		Computers	3	General Office Supplies			Transcripts, service records, test scores, applications	Department Head/Director of Certification	1
		Printer	1	Letterhead	2 boxes			Staff assistant	1
		Fax	1	Envelopes	2 boxes			Secretary	1
		Scanner	1						
College of Engineering									
• Center of Excellence for Communication Systems Technology Research (CECSTR)									
Network Connectivity		Computer	3			Grant RFP		Staff	3
Internet		Phones	3			Call List			

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
• Chemical Engineering									
Computers, student lab	20	Lab experiments for teaching	12	Paper, cases	12	Student work	Official memoranda	Faculty	5
Computers, faculty and staff offices	10	Copier	1	Books		Project reports	Performance evaluations	Secretary	1
Computers, laptop	5	Fax machine	1			Research data	Meeting minutes	Head	1
Computers, research lab	5	Data projectors, fixed	2				Registration forms		
		Data projectors, portable	3				Grade books		
		Furniture, offices	10						
• Civil Engineering									
		Teaching Laboratory Equipment		Paper	20 cases	Registration	Student Records	Faculty (Full-Time)	4
		Projectors	10	Books		Advisement	Faculty Files	Faculty (Part-Time)	2
		Copier	2	Laboratory Supplies		Scholarship	Inventory Records	Staff	1
		Fax Machine	1	Office Supplies		Research projects	Assessment Records	Department Head	1
		Office Furniture		Gloves	100 pairs	Student Work	Staff Records		

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Printers	10	Eye Wear	100 pairs		Faculty Meeting Minutes		
		Telephones	10	Masks	100		Payroll Documents		
		Computers (Desk)	25	Pencils/Pens	150 each		Financial Account Records		
		Surge Protectors	30	Chalk	50 boxes				
		Computers (Laptop)	9	Portable Boards	10				
• Computer Science									
Software	25	Desks	41	Paper	10 cases	Research Data	Student Data	Faculty	8
Computers	180	Classrooms Facility	2	Writing Utensils	100		Research Data	Staff	2
Printers	16	Phones	14	Storage Devices	100				
Servers	1	Surge Protectors	90	Printer Toner	10				
Projectors	2								
Photocopier	1								
Facsimile	1								
Scanner	10								
• Electrical & Computer Engineering									
Network		Computer	40	Paper	40 boxes			Head	1
		Copier	1	Pens				Secretary	1

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Printer	3					Technician	1
								Professors	15
• Engineering Technology									
Faculty Computers	2	Personal Computers	2	General Office		Student Records		Administrative Assistant	1
Staff Computers	8	Telephones	3					Department Head	1
Student Use Computers	20							Technician	1
Network Printers	3							Professional Advisor	1
Copiers	1								
• Mechanical Engineering									
Computers, student lab	55	Lab experiments for teaching	16	Paper, cases	12	Student work	Official memoranda	Faculty	5
Computers, faculty and staff offices	15	Copier	1	Books		Project reports	Performance evaluations	Secretary	1
Computers, laptop	10	Fax machine	1			Research data	Meeting minutes	Head	1
Computers, research lab	20	Data projectors, fixed	3				Registration forms		
		Data projectors, portable	3				Grade books		
		Furniture, offices	12						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
College of Juvenile Justice & Psychology									
Overhead Projectors	28	Surge Protectors	82	Pens	72 packs	Students Records	Student Information	Dean/Director	1
Staff Computers	10	Speakers	100	Pencils	72 packs		Financial Account Information	Associate Director	1
Faculty Computers	25	Telephones	40	Paper for faculty/staff	15 cases			Department Head	2
Student Use Computers	55			Paper for Students	30 cases			Administrative Assistant	2
Network Printers	3			Printer Ink for network printers	12			Executive Secretary	3
Faculty Printers	25			Printer ink for faculty/staff	96			Senior Secretary	1
Copiers	4							Training Specialist	1
Fax Machine	3							Research Scientist	1
								Recruiter	0
College of Nursing									
		Servers	13	Scantron Forms (Testing)	4 boxes	Contact Information (Staff)	Student Record	Director; Computer Engineer; System Analyst; Video-Tech	4

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Printers	3			Contact Information (Students)	Testing System (Final Grades, etc)	System Analyst	1
		Computer/ Laptops	10			Vendor Contact List	Test Questions	Lab. Coordinator	1
		Phone	8					Professor	2
Distance Learning									
Internet		PC Based Server	2	Paper	1 Box	Inventory Listing		Director	1
Email	10	PC Systems	4	Copier	1	Network Diagram		Adm. Assistant	1
MS Office	5	MAC System	2			IP Listings		Telecomm. Mgr.	1
Server 2008	4	Video Bridge	1			Vendor Listings		Network Mgr.	1
Adobe Suite	5	VCMS	1			Support Contracts		Instructional Dsgn.	2
Nero	5	CMS	1			Tech. Supp Contacts		DL Tech.	1
Toast	2	Video Cameras	4					Student Support	3
XP	3	Dt Video Cam	10						
MAC OS	2	VCS Systems	2						
		Printer	1						
		Fax	1						
		Telephones	2						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Graduate School									
Network Access (Internet service, telephone service, etc.)		Computers	8	Paper	400 rms	Admissions application packet items		Dean	1
		Printer	8	Cartridges	4 ea per printer		Transcripts, supporting documents required of international students	Support Staff	8
				Toner	8-10 ea				
		Copier-Scanner- Fax Combo	1	General Office Supplies (pens, message pads, staplers, staples, file folders, file folder labels, etc.)	Sufficient amount for support staff				
Library Services									
Lab with Computers		Computers	25			Employee Call Listing		Staff	10
Access To System		Phones	2						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
		Printer/fax/scanner	1						
Student Financial Aid									
Computers	15	Copier	1	Calculators	15			Data Assistant	1
				Paper				Counselors	8
								Reconciliation	3
								Scholarship	1
								Loans	1
Undergraduate Medical Academy									
Overhead Projectors	4	Surge Protectors	15	Pens	50	Student records	Student Information	Executive Secretary	1
Staff Computers	3	Speakers	4	Pencils	50		Financial Account Information	Administrative Coordinator	1
Faculty Computers	2	Telephones	6	Paper for Faculty/Staff	3 cases			Recruiter	2
Student Use Computers	7	Scanners	2	Paper for students	5 cases			Dean/Director	1
Network Printers	3			Printer ink for network printers	4			Med Science Program Coordinator	1
Faculty Printers	2			Printer ink for faculty/ staff	4			Laboratory Specialists	1
Copiers	1							Faculty	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Fax Machine	1								
Scanners	2								
Server	1								
University College									
Computers	12	Xerox	1	Paper	2	Pas student notebooks/files		Professional Advisors	14
		Fax	1					Administrators	5
		Phones	3					Clerical	3
								Student Workers	12
<ul style="list-style-type: none"> University College – Division of Academic Enhancement 									
		Computer - Student	30	Printer Paper	50 per/person			SysAdmin	1
		Computer - F / S Personnel	20	Printer Paper	250 per/person			Student Workers	4
		Printer	2	USB- Drive - Student	50ea -2g			Director	1
		Copier	1	USB- Drive - F / S Personnel	25ea. -4g				
		Fax	1						
		Telephones	2						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Research & Development									
Alumni Relations									
Computer	1	Desk	1	Envelopes	5 boxes	Backup Plan (Describes where everything is within the office, etc)		Staff	1
Printer/Copier	1								
Phone	1								
Director of Development									
Internet	4	PC	4	Pens	4	Credit Card Forms	Donor Records	Staff	4
		Printer/scanner/copier/fax	1	Printer Paper	8				
Office Special Projects (OSP)									
FAMIS	4	Telephone	4	General Office Supplies			Project Files	Pre-award	1
Canopy	4	Facsimile	1				Telephone Lists	Post award	1
Microsoft Office	4	Copier/Printer	1					Accounting and Reporting	1
Adobe Acrobat	4	Computer	4						
Pure Edge Viewer	4	Server	1						
Entire Connection	4	Adding Machines	4						

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Internet	4	Typewriter	1						
Banner	4								
Research Foundation									
FAMIS	6	Telephone	4	General Office Supplies			Project Files	Manager	1
Canopy	6	Facsimile	1				Telephone Lists	Coordinator	1
Microsoft Office	6	Copier/Printer	1					Sr. Project Administrator	1
Adobe Acrobat	6	Computer	4						
Pure Edge Viewer	2	Server	1						
Entire Connection	1	Adding Machines	4						
Internet	6	Typewriter	1						
Banner	6								
Research Regulatory and Compliance									
Computer	1	Desk	1			Incoming forms that have not been scanned in yet		Staff	1
Phone	1					Committee Roster/Information			
Printer									

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
Title III									
Internet		Computers	4	Paper	2 boxes		Project documents	Director	1
Email		Printers	2	Printer cartridges	4		Activity reports	Business Mgr.	1
MS Office		Scanners	2					Student Support	4
Acrobat		Copier	1						
		Fax	1						
		Telephones	2						
Student Affairs & Institutional Relations									
• Institutional Relations/ Student Affairs									
		Printer/copier	3			Call Lists (including: Government agencies, Public Relations, etc)		Government Relations	1
		Computer	20					Public Relations	2
		Phones	20					Equal Opportunity Affirmative Actions	1
								Multi-culture Programs	1
								Student Activities	6
								Testing & Disabilities Services	2

Exhibit C – Minimum Resource Requirements Listing

Technology		Equipment		Supplies		Documentation	Vital Records	Staff	
Item Description	Quantity	Item Description	Quantity	Item Description	Quantity			Classification	Quantity
								Student Conduct	2
								All Faith Chapel	2
								Special Programs	1
								Intramural & Recreational Sports	2
								Career Services	5

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Section	Name	Description
1	Overview	The BCP is an internal Plan to ensure that a viable capability exists to continue critical and essential functions across a wide range of potential emergencies through plans and procedures that delineate essential functions; specify succession to office and the emergency delegation of authority; provide for the safekeeping of vital records and databases; identify alternate operating facilities; provide for interoperable communications; and validate the capability through tests, training, and exercises.
1.1	Introduction	Defines the purpose of the Plan and identifies the specifics of how the plan will help the University during an emergency.
1.2	Recovery Strategies Overview	A list of the critical and essential applications and related technology infrastructure and their recovery strategy to be used in the event of a disaster.
1.3	Relocation Strategies Overview	A list of potential alternate work locations for each business unit.
1.4	Plan Organizational Structure	An overview of the Recovery Team structure to be used in the event of a disaster.
1.5	Plan Assumptions	Identifies a list of planning assumptions the University used when writing the BCP.
1.6	Plan Activation Process	Defines when the Plan should be activated based on the magnitude of the event and who is authorized to activate the Plan.
1.7	Emergency Procurement	Identifies the University emergency procurement procedures.
2	Background	This section defines how the Plan was developed and includes: <ul style="list-style-type: none"> • Plan Objectives and Scope • Benefits • BCP Policy Statement • Plan Maintenance and Distribution • BCP Development Methodology
2.1	Plan Objectives and Scope	Includes the written planning objectives, applicability and scope to ensure the execution of mission critical and essential functions without interruption in the event of any emergency or event.
2.2	Benefits	Includes a list of planning benefits before, during and after a disaster event.
2.3	BCP Policy Statement	Identifies the policy statement the University has developed for recovery planning.

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Section	Name	Description
2.4	Plan Maintenance and Distribution	Identifies who is responsible for the maintenance activities, distribution, and periodic testing of the recovery Plan.
2.5	BCP Development Methodology	Describes the phased approach and development methodology of Business Continuity Planning Department
3	Communications Plan	Documents proper internal and external communications that are critical to the University's successful recovery from a disaster. A comprehensive communications strategy is a critical component of the BCP.
3.1	Overview	Includes information on both internal and external communications outlining effective communications during a disaster.
3.2	Recovery Team Communications	Contains communication procedures for the Recovery Teams to follow to ensure effective communications between Recovery Teams during a disaster.
3.3	Faculty and Employee Communications	Includes the potential methods of faculty and employee communication: <ul style="list-style-type: none"> • Faculty and Employee calling list • Intranet (Internal Web Site) announcements • Internet (External Web Site) announcements • Email announcements • Voicemail announcements • News Media Announcements
3.4	Vendor Communications	Contains communication procedures regarding the type of information that should be provided to vendors in the event of an emergency.
3.5	Student Communications	Contains communication procedures regarding the type of information that should be provided to students in the event of an emergency.
3.6	News Media Communications	Includes the University's policies and procedures to facilitate effective communications when handling the news media.
3.7	Other Communications	Includes procedures on additional types of communication, which may be required by the University.

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Section	Name	Description
4	NIMS / ICS Structure	The BCP will be structured in accordance with the National Incident Management System (NIMS) / Incident Command System (ICS).
4.1	National Incident Management System	NIMS enhances the management of domestic incidents by establishing a single, comprehensive system for incident management and will help achieve greater cooperation among agencies at all levels of government. This system provides a consistent nationwide approach for federal, state, and local governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.
4.2	Incident Command System	The BCP will be organized according to the Incident Command System (ICS). The major functional areas of ICS include: (1) Command, (2) Operations, (3) Planning, (4) Logistics, and (5) Finance/Administration.
4.3	ICS Primary Positions & Functions	Identifies the primary functions of the major ICS positions.
4.4	Orders of Succession	Identifies a succession plan in the event of a disaster in case one or more persons within the leadership structure is unable to assume their duties, the following
4.5	Delegations of Authority	Identifies Delegations of Authority so that all organization personnel know who has the right to make key decisions during a continuity situation.
4.6	Reporting to Work Policies	Lists policies, procedures and guidelines for faculty and staff to follow when reporting to work before, during and/or after a disaster occurs.
5	Command Team	The Command Team has complete authority during a disaster event.
5.1	Incident Commander	
5.1.1	Disaster Verification	Guidelines to verify the disaster.
5.1.2		
5.1.3	Business Continuity Plan Activation	Guidelines for plan activation based on the magnitude of the event.
5.1.4	EOC Activation	Specific information regarding the role of the EOC.

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Section	Name	Description
5.1.5	Monitoring Recovery Activities	Guidelines specific to monitoring the recovery process. Information to be monitored will include: <ul style="list-style-type: none"> Recovery Team updates Weather and environmental status updates Personnel activities (hours, stress levels, etc.)
5.1.6	Legal Considerations	Guidelines specific on the use of legal counsel during a disaster.
5.2	Public Information Officer	Responsibilities of the Public Information Officer.
5.2.1	Communications	Guidelines for public communication.
5.3	Safety Officer	Responsibilities of the Safety Officer.
5.3.1	Damage Assessment Coordination	Guidelines to assess the damage caused by the event.
5.4	Liaison Officer	Responsibilities of the Liaison Officer.
5.4.1	Other Agencies Coordination	Guidelines for coordination with other Agencies.
5.5	Planning Officer	Responsibilities of the Planning Officer.
5.5.1	Team Scheduling	Guidelines to assist in establishing a master schedule for scheduling the BCP Teams in the event of a disaster.
5.6	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
5.7	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort that were unexpected and unplanned.
6	Logistics Section: Facilities BCP Team	The Facilities BCP Team is responsible for the University facilities affected by the disaster.
6.1	Initial Procedures	Lists initial procedures for the team to follow if the BCP is activated.
6.2	Notification Procedures	Lists procedures to contact other Recovery Teams.
6.3	Facility Procedures	Guidelines for damage assessment and recovery operations related to University facilities affected by the disaster.
6.4	Salvage Procedures	General salvage procedures for property damaged in the disaster. This includes any equipment, office furniture, record media, supplies, and personal effects remaining after the disaster.
6.5	Security Procedures	Security procedures required for the facility affected by the disaster and the alternate work sites.
6.6	Status Reporting	Guidelines for reporting Team status to the Command Team.

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Section	Name	Description
6.7	Administration	Guidelines for administrative functions (e.g., time keeping) to continue during an emergency.
6.8	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
6.9	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort which were unexpected and unplanned.
7	Logistics Section: Human Resources BCP Team	
7.1	Initial Procedures	Lists initial procedures for the team to follow if the BCP is activated.
7.2	Notification Procedures	Lists procedures to contact other Recovery Teams.
7.3	Personnel Coordination	Guidelines for all personnel related issues during and emergency.
7.4	Personal Preparedness	Guidelines for personal disaster preparedness.
7.5	Employee Well Being	Guidelines to ensure that employees are taken care of before, during and after a disaster event.
7.6	Status Reporting	Guidelines for reporting Team status to the Command Team.
7.7	Administration	Guidelines for administrative functions (e.g., time keeping) to continue during an emergency.
7.8	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
7.9	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort which were unexpected and unplanned.
8	Logistics Section: Technology BCP Team	The Technology BCP Team is comprised of individuals responsible for restoring systems, providing connectivity from the recovery site to the users, and providing recovery assistance for data equipment in the event of a disaster.
8.1	Initial Procedures	Lists initial procedures for the team to follow if the BCP is activated.
8.2	Media and Equipment Protection	Guidelines on how to protect media and equipment during a disaster.
8.3	Current System and Application Status	Guidelines to identify the current system and application status including work in progress and application recovery.
8.4	Media Retrieval Procedures	Guidelines to retrieve backup media from offsite storage.
8.5	Recovery Site Startup	Guidelines for successful recovery site start-up procedures.

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Section	Name	Description
8.6	Server Installation and Configuration	Guidelines and procedures specific to server installation and configuration.
8.7	Data Communications and Circuits Restoration	Guidelines and procedures specific to the communications network restoration.
8.8	Network Equipment Restoration	Guidelines and procedures specific to server restoration.
8.9	Application and Database Restoration	Guidelines and procedures for application and database restoration and testing.
8.10	Application and Database Verification	Guidelines and procedures for application and database verification and testing.
8.11	Recovery Center Processing and Operations	Guidelines for processing at the Recovery Center.
8.12	Desktop Restoration	Guidelines and procedures for the restoration of desktop equipment (e.g., PCs).
8.13	Help Desk and User Support	Guidelines to establish a help desk and user support function at the Recovery Center.
8.14	<i>Security</i>	Lists security activities for the University to follow in the event of a disaster.
8.15	Status Reporting	Guidelines for reporting Team status to the Management Recovery Team.
8.16	Administration	Guidelines for administrative functions (e.g., time keeping) to continue during an emergency.
8.17	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
8.18	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort that were unexpected and unplanned.

9	Finance / Administration BCP Team	
9.1	Initial Procedures	Lists initial procedures for the team to follow if the BCP is activated.
9.2	Notification Procedures	Lists procedures to contact other BCP Teams.
9.3	Funding Procedures	Guidelines for funding large expenditures.
9.4	Postal and Courier Services	Guidelines for ensuring mail delivery from the US postal service and couriers during a disaster.

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Section	Name	Description
9.5	Transportation, Lodging, and Food	Guidelines to obtain transportation, lodging and food in the event of an emergency.
9.6	Emergency Procurement	Specific University emergency procurement procedures.
9.7	Status Reporting	Guidelines for reporting Team status to the Management Recovery Team.
9.8	Administration	Guidelines for administrative functions (e.g., time keeping) to continue during an emergency.
9.9	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
9.10	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort which were unexpected and unplanned.
10	Operations Section: Department BCP Teams	The Department BCP Teams have the responsibility for initiating alternate procedures, executing BCP procedures, and performing critical business functions at alternate sites (if required) during a disaster.
10.1	Initial Procedures	Lists initial procedures for the team to follow if the BCP is activated.
10.2	Notification Procedures	Lists procedures to contact other Recovery Teams members.
10.3	Communications	Guidelines for maintaining regular communications with other Recovery Teams and other parties as required.
10.4	Staffing	Guidelines to determine if staffing levels in an affected facility are adequate to perform the critical and essential functions.
10.5	Department Scheduling	Guidelines to assist in establishing a master schedule for staffing and resources required to maintain the continuance critical business processes and uninterrupted operations.
10.6	Relocation Procedures	Guidelines for the transition from the affected facility to an alternate work site.
10.7	Vital Records	Guidelines for recovering vital records damaged in the disaster.
10.8	Department Recovery Procedures	Contains the interim and restoration procedures for the Department's critical and essential functions and tasks that support them. The Department BCP Team will use this information to ensure that Department is able to perform the critical and essential functions in a timely manner.
10.9	Status Reporting	Guidelines for reporting Team status to the Command Team.

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Section	Name	Description
10.10	Administration	Guidelines for administrative functions (e.g., time keeping) to continue during an emergency.
10.11	Reconstitution and Termination	Guidelines to return to normal operations after a disaster event.
10.12	Ad Hoc Procedures	Used to document additional procedures performed during the recovery effort which were unexpected and unplanned.
11	Plan Administration	This section should include Plan administration procedures and should detail specific policies and procedures for Plan distribution and maintenance.
11.1	Plan Distribution	Guidelines to monitor and track each copy of the Plan.
11.2	Plan Maintenance	Guidelines for administration and maintenance of the Plan.
11.3	BCP Maintenance Checklist	A checklist which identifies the section of the Plan, section description, minimum maintenance frequency and who is responsible (individual or Team) for the maintenance of that specific section of the Plan.
12	Team Member Notification Guidelines	This section lists the potential notification methods and appropriate notification procedures to follow when contacting Recovery Team members in the event of a disaster.
12.1	Notification Methods	Lists the types of methods used to notify Recovery Team members during a disaster event.
12.2	Notification Procedures	Notification guidelines to follow when contacting Recovery Team members during a disaster event.
13	Team Assignment Forms	These forms are used to assign members to the Recovery Teams.
	Exhibit 1: Command Team Assignment Form	Lists the employees assigned to the Command Team and their position: <ul style="list-style-type: none"> • Incident Commander • Public Information Officer • Safety Officer • Liaison Officer • Planning Officer

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Section	Name	Description
	Exhibit 2: Logistics Section: Facilities BCP Team Assignment Form	Lists the employees assigned to the Facilities Team and their position: <ul style="list-style-type: none"> • Team Manager and Alternate • Team Members and Alternates
	Exhibit 3: Logistics Section: Human Resources BCP Team Assignment Form	Lists the employees assigned to the Human Resources Team and their position: <ul style="list-style-type: none"> • Team Manager and Alternate • Team Members and Alternates
	Exhibit 4: Logistics Section: Technology BCP Team Assignment Form	Lists the employees assigned to the Technology Team and their position: <ul style="list-style-type: none"> • Team Manager and Alternate • Team Members and Alternates
	Exhibit 5: Finance / Administrative BCP Team Assignment Form	Lists the employees assigned to the Finance / Administrative Team and their position: <ul style="list-style-type: none"> • Team Manager and Alternate • Team Members and Alternates
	Exhibit 6: Operations Section: Department Team Assignment Form	Lists the employees assigned to the Department BCP Team and their position: <ul style="list-style-type: none"> • Team Manager and Alternate • Team Members and Alternates
14	Notification Forms	These forms document information required for notification purposes in the event of a disaster.
	Exhibit 7: Employee Calling List	Master list of employee contact information. Information includes: <ul style="list-style-type: none"> • Name/Title • Address • Home/work telephone numbers • Cell/pager telephone numbers • Contact date and time (to be completed at the time of disaster)

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Section	Name	Description
	Exhibit 8: Vendor Calling List	<p>Master list of vendor contact information that are critical to the University. Information includes:</p> <ul style="list-style-type: none"> • Vendor Name/Contact • Service/Product • Day/night telephone numbers • Cell/pager telephone numbers • Email address • Website address • Alternate Vendor • Contact date and time (to be completed at the time of disaster)
	Exhibit 9: Emergency Contact List	<p>Master list of contact numbers for emergency organizations (i.e., hospitals, police departments, fire departments, Red Cross, etc.) and specific services (e.g. utility companies) that are vital to the recovery process. Information includes:</p> <ul style="list-style-type: none"> • Organization Name/Contact • Description of service provided • Day/night telephone numbers • Cell/pager telephone numbers • Email address • Website address • Contact date and time (to be completed at the time of disaster)
	Exhibit 10: Disaster Declaration Authorization Listing	<p>Documents specific individuals within the University who have the authority to declare a disaster and activate the Business Continuity Plan. Information includes:</p> <ul style="list-style-type: none"> • Name/Title • Email address • University/department where individual is located • Home/office telephone numbers • Cell/pager telephone numbers • Recovery Team to which individual is assigned
	Exhibit 11: Unused	Use this form if required.

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Section	Name	Description
15	Inventory Forms	Documents the University's critical inventories and resource requirements in the event of a disaster.
	Exhibit 12: Hardware Inventory	Lists the existing computer hardware used by the University. Information includes: <ul style="list-style-type: none"> • Description • ID number • Vendor name • Technical specifications • Quantity • Hardware maintenance vendor
	Exhibit 13: Software Inventory	Lists the existing computer software used by the University. Information includes: <ul style="list-style-type: none"> • Description • ID number • Vendor name • Technical specifications • Quantity • Software maintenance vendor
	Exhibit 14: Resource Requirements	Lists the critical resource requirements for each Department and in total for the recovery process including, office equipment, office supplies, forms and documentation. Information includes: <ul style="list-style-type: none"> • Reference number • Description • Item number • Vendor • Specifications • Replacement lead time
	Exhibit 15: Office Space Configuration	Lists the standard workstation configuration and specific items required to facilitate the planning and recovery process. Information includes: <ul style="list-style-type: none"> • Description (i.e., desk, chair, file cabinet, etc.) • Quantity

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Section	Name	Description
	Exhibit 16: Off-Site Storage Inventory	Lists materials stored off-site at each location. Information includes: <ul style="list-style-type: none"> • Description of item (i.e., data files, application software, O/S software, BCP copies, critical forms, supplies and documentation, etc.) • Identification number • Quantity • Rotation frequency (daily, weekly, monthly, quarterly, annually) • Person responsible for performing off-site storage procedure(s).
	Exhibit 17: Unused	Use this form if required.
16	Recovery Forms	These forms will be used by the University after a disaster event has occurred.
	Exhibit 18: Disaster Assessment Report	Documents the status of the University following a disaster event. Information includes: <ul style="list-style-type: none"> • Time reported • Date reported • Name of person submitting initial alert • General description of disaster • External support requirements • Impact level on key resources • Damage magnitude • Extent of damage • Estimated recovery time • Overall event declaration level • Additional information • Report prepared by/date/time
	Exhibit 19: Team Recovery Progress Report	Documents the recovery process and status following a disaster event. Information includes: <ul style="list-style-type: none"> • Progress since last report • Problems requiring management attention • Requests for additional resources/support • Anticipated problems

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Section	Name	Description
	Exhibit 20: Emergency Operations Center Locations	Lists the primary and secondary locations of the EOC. Information includes: <ul style="list-style-type: none"> • Location/address • Primary and alternate contact information including name, telephone number(s), email, etc.
	Exhibit 21: Emergency Operations Center Equipment and Supplies	Lists the quantity and storage location of equipment and supplies necessary for the EOC. Information includes: <ul style="list-style-type: none"> • Description of equipment and supplies • Quantity • Storage location
	Exhibit 22: Alternate Work Sites	Lists potential locations that could be used in the event of a disaster that renders the existing facilities unusable. Information includes: <ul style="list-style-type: none"> • Name of alternate facility • Space available • Contact information (name, telephone number(s), pager, etc.)
	Exhibit 23: Application and System Recovery Priorities	Lists the systems and applications priorities that are necessary for recovery. Information includes: <ul style="list-style-type: none"> • Priority • Recovery Time • Application • Platform • Responsibility
	Exhibit 24: Unused	Use this form if required.

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Section	Name	Description
17	Maintenance Forms	These forms are to be used to update and maintain the BCP.
	Exhibit 25: Plan Control List	Record all copies of the BCP issued to various personnel. Information includes: <ul style="list-style-type: none"> • Plan number • Date issues • Team name • Team member • Storage location of plan document(s) • Signature of person receiving plan document(s)
	Exhibit 26: Plan Maintenance Log	Log and document the updates to the Plan. Information includes: <ul style="list-style-type: none"> • Maintenance date • Number of section that has been updated • Number of procedures that has been updated • Number of exhibit that has been updated • Reason for update • Additional comments regarding the update(s) • Name of person approving the update(s)
18	Glossary of Terms	Lists specific disaster recovery and business continuity planning terms and their definitions.