

ROCHESTER-GENESEE REGIONAL TRANSPORTATION AUTHORITY

Business Impact Analysis and Recovery Strategies Recommendations Report

March 2009

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EXECUTIVE SUMMARY

1.1 PROJECT OBJECTIVES

The main objective of the project is to develop a comprehensive IT Business Continuity/Disaster Recovery Plan for the Rochester-Genesee Regional Transportation Authority (RGRTA) 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
- Phase 2 - Recovery Strategy Recommendations
- Phase 3 – Plan Design and Documentation
- Phase 4 – Plan Validation: Training and Testing

The Authority is heavily dependent upon sophisticated information systems and communications for all aspects of their operations. Most Departments of the Authority 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. This report contains the results of the Business Impact Analysis process.

Business Impact Analysis

The goal of the Business Impact Analysis report was to develop a prioritized list of business recovery targets that become the focus of subsequent recovery strategies. The BIA provides the foundation for developing well-reasoned and prioritized responses. Since the resources of the Authority are limited, the BIA analysis will help to ensure that the subsequent IT Business Continuity/Disaster Recovery Plan is focused on reestablishing the most critical resources in the most cost effective manner to minimize loss and disruption resulting from a potential disaster event.

The business impact analysis involved identifying the critical business processes and related supporting resources within RGRTA departments and determining the potential impact of an outage or disruption in services. The process included a comprehensive assessment of all business activities that are performed within RGRTA departments, as well as an analysis of the supporting resources that are required to perform these activities. This includes support in the form of servers, network, PCs, communications, facilities, systems software, and applications software.

Recovery Strategies Recommendations

The objective of this phase of the project was to:

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

This report identifies recovery strategies for critical information technology systems, infrastructure, and facilities. The recovery strategies were formulated from information derived from the Business Impact Analysis (BIA) and best practices for the industry. The analysis focuses on identifying cost-effective options for the most critical applications and their associated information technology infrastructure used to access and support these applications.

1.2 OUTAGE IMPACT SUMMARY AND APPLICATION ANALYSIS

A key aspect of the Business Impact Analysis involved identifying the critical applications within each department and determining the impact of not performing the business process related to that application beyond the maximum acceptable outage. The following departments assisted with this effort by completing comprehensive Application BIA Analysis Questionnaires:

#	Department
1.	Call Center
2.	Executive
3.	Finance and Accounting
4.	Human Resources
5.	Legal Affairs
6.	Lift Line & Regionals
7.	Maintenance
8.	Marketing
9.	RTS Operations
10.	Procurement and Grants Administration
11.	Scheduling

Impact Levels

The department's used the following categories to rate the impact of an application outage to performing their related to business processes:

- Department Operations
- Financial/Economic
- Customer Service
- Public Safety/Public Health
- Statutory/Regulatory

The impact levels (of not performing the business processes related to the application) were assigned by the departments to each of the above categories using the following ratings as: *Severe, Moderate, Minor, or Not Applicable.*

Application Analysis

The following information was gathered and analyzed for each software application:

- Maximum Outage (period of time the business process that uses the application could be deferred) as determined by the users
- Availability of Alternate Processing Methods such as manual procedures
- How often (cycle) the application is used (i.e., daily, weekly, etc.)
- Duration (length of time) that the alternate process could be performed
- Volume (# of transactions per cycle)
- Potential Litigation

The results of the outage impact analysis is summarized below. This summary information is useful in understanding the rational for the criticality of the specific applications identified by the RGRTA departments.

EXECUTIVE SUMMARY

#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
1	Call Center											
	Business Objects	Moderate	Minor	Moderate	Moderate	Minor	5 or more days	No		Weekly	5 – 6 times per week	Yes
	Charter	Severe	Severe	Severe	Severe	Severe	2 days	No		Daily	Continuously	Yes
	Logic Tree	Severe	Moderate	Severe	Minor	Minor	1 day or Less	Yes	Depending on personnel	Daily	Constant	No
	Microsoft Office	Severe	Severe	Severe	Minor	Minor	2 days	No		Daily	Continuously	No
	Symposium	Severe	Severe	Severe	Minor	Severe	1 day or Less	No		Daily	Continuously	Yes
	Tooty	Moderate	N/A	Minor	N/A	N/A	5 or more days	No		Quarterly	20 – 30 times per quarter	No
	Trapeze	Severe	Severe	Severe	N/A	Minor	1 day or less	Yes	4 hours	Daily	Continuously	Yes
2	Executive											
	Adobe Reader 8	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Monthly	Several times per month	No
	AS/400	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Monthly	1 – 3 times per month	No
	Citrix	Severe	N/A	Minor	N/A	N/A	5 or more days	No		Weekly	Several times per week	Yes
	Microsoft Excel	Moderate	Moderate	Moderate	Minor	Minor	5 or more days	No		Weekly	6 – 12 times per week	Yes
	Microsoft Outlook	Severe	Severe	Severe	Severe	Severe	1 day or Less	No		Daily	Constantly	Yes
	Microsoft PowerPoint	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Monthly	Once per month	No

EXECUTIVE SUMMARY

#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
	Microsoft Project	Severe	Moderate	Minor	N/A	N/A	5 or more days	No		Daily	1 – 3 times a day	Yes
	Microsoft Publisher	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Infrequent	Infrequent	No
	Microsoft Word	Severe	Moderate	Moderate	Minor	Minor	1 day or Less	No		Daily	6 – 12 times per day	Yes
	Windows Media Player	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Monthly	Several times per month	No
	WinZip	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Infrequent	Infrequent	No
3	Finance and Accounting											
	RAMCO Financial Suite	Severe	Severe	Severe	Moderate	Severe	1 day or less	No			Approximately 175 daily	Yes
4	Human Resources											
	Charter	Moderate	Minor	Severe	Moderate	Minor	5 or more days	Yes	Indefinitely		Daily	No
	Highline Payroll / HR System	Severe	Moderate	Minor	N/A	Severe	1 day or less	Yes	1 week		Continuously	Yes
	RAMCO Financial Suite	Minor	Moderate	N/A	N/A	Minor	5 or more days	Yes	Indefinitely		2 – 3 times per month	No
5	Legal Affairs											
	Adobe Acrobat	Moderate	Minor	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Daily	Multiple times	No
	Charter	Moderate	Minor	Moderate	Moderate	N/A	5 or more days	Yes	Indefinitely	Daily	1 – 2 times	No
	Citrix	Minor	Minor	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Weekly	3 – 4 times	No
	Dragon Speech Dictation System	N/A	N/A	N/A	N/A	Moderate	5 or more days	Yes	Indefinitely	Daily	Multiple times	No
	Highline Payroll / HR System	Moderate	Minor	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Daily	3 – 5 times	No

EXECUTIVE SUMMARY

#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
	Lenel Camera System	Moderate	Moderate	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Monthly	10 times	No
	Microsoft Office	Severe	Severe	Severe	N/A	Moderate	5 or more days	No		Daily	Heavy use	No
	Outlook Add-in	Minor	Minor	N/A	N/A	N/A	5 or more days	No		Daily	Multiple times	No
	Nero	N/A	N/A	N/A	N/A	N/A	5 or more days	No		Weekly	1 – 2 times	No
	Pictomertry	N/A	N/A	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Monthly	2 times	No
	RAMCO Financial Suite	Moderate	Severe	N/A	N/A	Moderate	5 or more days	Yes	7 days	Daily	Multiple times	No
6	Lift Line & Regionals											
	ArcView	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Monthly	Once per month	
	Citrix	Minor	N/A	N/A	N/A	N/A	5 or more days	No		Weekly	5 times per week	No
	Highline Payroll / HR System	Severe	Severe	N/A	N/A	N/A	5 or more days	No		Weekly	Once per week	No
	Microsoft Office	Severe	Moderate	Moderate	N/A	Minor	1 day or less	No		Daily	Heavy use	No
	Microsoft Publisher	N/A	N/A	N/A	N/A	N/A	5 or more days	No		Quarterly	Once every several months	No
	Pictomertry	Minor	N/A	Minor	Minor	Minor	5 or more days	No	Indefinitely	Bi-Weekly	Once every other week	No
	RAMCO Financial Suite	Severe	Moderate	N/A	Minor	Minor	5 or more days	Yes		Daily	All day in Parts Department	No
	Trapeze Customer Care	Moderate	N/A	Moderate	N/A	Minor	5 or more days	No	Indefinitely	Weekly	Weekly	Yes
	Trapeze Pass	Severe	Moderate	Severe	Moderate	Severe	1 day or less	Yes	None	Daily	All day long Scheduling Department	No

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#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
7	Maintenance											
	AS/400	Minor	Minor	Minor	Moderate	Moderate	2 days	No		Daily	3 times daily	Yes
	Crystal Reports	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Weekly	Once daily	Yes
	Fleetwatch	Minor	Minor	Minor	Minor	Minor	5 or more days	Yes	7 Days	Daily	Once daily	Yes
	Highline Payroll / HR System	Minor	Minor	Minor	Minor	Minor	1 day or less	Yes	7 Days	Daily	13 times daily	Yes
	Kronos	Minor	Minor	Minor	Minor	Minor	5 or more days	Yes	7 Days	Daily	13 times daily	Yes
	Microsoft Excel	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Daily	Continuous	Yes
	Microsoft Outlook	Minor	Minor	Minor	Minor	Minor	5 or more days	Yes	7 Days	Daily	20 times daily	No
	Microsoft PowerPoint	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Monthly	3 times daily	Yes
	Microsoft Visio	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Weekly	Once daily	Yes
	Microsoft Word	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Daily	Continuous	Yes
	Paner	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Daily	Once daily	Yes
	RAMCO Financial Suite	Minor	Minor	Minor	Minor	Minor	5 or more days	No		Daily	2 times daily	Yes
8	Marketing											
	Adobe Programs	N/A	Moderate	N/A	N/A	N/A	5 or more days	Yes	Indefinitely	Daily	Daily	No
	Microsoft Office	Moderate	Moderate	Minor	N/A	N/A	1 day or less	Yes	Indefinitely	Daily	Daily	No
	Microsoft Outlook	Severe	N/A	Severe	Severe	N/A	1 day or less	Yes	Indefinitely	Daily	Daily	No

EXECUTIVE SUMMARY

#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
9	RTS Operations											
	AS/400	Moderate	Minor	Severe	Minor	Minor	5 or more days					
	Charter	Moderate	Minor	Moderate	Moderate	N/A	1 day or less	No		Daily	Frequently	Yes
	Highline Payroll / HR System	Severe	Moderate	Minor	N/A	Severe	5 or more days	No		Daily	High Volume	Yes
	Lenel Camera System	Minor	Moderate	N/A	Severe	Moderate	5 or more days	No		Daily	Frequently – continuous monitoring, potential for playback	No
	Microsoft Office	Severe	Severe	Severe	Minor	Minor	5 or more days	No		Daily	Frequently	No
	Nice Racal Mirra	Severe	Severe	Severe	Minor	Minor	2 days	No		Daily	Frequently	No
	Orbital Science (ACS)	Severe	Severe	Severe	Minor	Minor	1 day or less	No		Daily	Frequently	Yes
	Petro Vend	Moderate	Moderate	Minor	Moderate	Moderate	1 day or less	No		Daily	Continuous recording	Yes
	Picometry	Severe	Severe	Severe	Severe	Severe	1 day or less	No		Daily	High volume	No
	Trapeze OPS	Minor	N/A	N/A	Minor	N/A	5 or more days	Yes	1 Week	Daily	Continuous	No

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#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
10	Procurement and Grants Administration											
	Adobe Acrobat	Minor	Minor	Minor	N/A	N/A	5 or more days	Yes	1 Week	Daily	10 – 12 times daily	No
	Microsoft Excel	Moderate	Minor	Minor	Minor	Minor	5 or more days	Yes	7 Days	Daily	100's of times daily	No
	Microsoft Outlook	Moderate	Moderate	Minor	Minor	N/A	5 or more days	Yes	1 Week	Daily	20 – 30 times daily	No
	Microsoft Word	Severe	Moderate	Minor	N/A	Minor	1 day or less	Yes	1 Day	Daily	100's of transactions daily	No
	RAMCO Financial Suite	Moderate	Moderate	Minor	N/A	N/A	1 day or less	Yes	1 Day	Daily	12 times daily	No
	Trapeze (Ride-Pro Car Pool Matching Software)	Severe	N/A	Moderate	N/A	N/A	5 or more days	No	1 Week	Daily	Once daily	No
	Veeder (Root Fuel Management and Leak Detection)	Moderate	Minor	N/A	Minor	Minor	5 or more days	Yes	1 Week	Daily	20 times daily	Yes

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#	Department/ Software Applications	Outage Impact					Maximum Outage	Alternate Processing Method	Duration	Cycle	Volume	Potential Litigation
		Department Operations	Financial / Economic	Customer Service	Public Safety / Public Health	Statutory/ Regulatory						
11	Scheduling											
	APCs	Severe	Moderate	N/A	N/A	Severe	1 day or less	No		Daily	Several times per day	No
	ArcView GIS	Minor	N/A	Severe	N/A	N/A	2 Days	No		As needed	As needed	No
	AS/400	Severe	Severe	Severe	N/A	N/A	1 day or less	No		Daily	1 time daily – sometimes more	No
	Charter	Minor	N/A	Severe	N/A	N/A	5 or more days	No		Monthly	Once a month or so	No
	Luminator/Twin Vision	Severe	N/A	Severe	N/A	N/A	1 day or less	No		Quarterly	1 Week each quarter	No
	Orbital (ACS)	Severe	Moderate	Severe	N/A	N/A	1 day or less	No		Daily	Depends	No
	Trapeze FX	Severe	Severe	Severe	N/A	Severe	1 day or less	No		Daily	Constantly	No

1.3 APPLICATION PRIORITIES AND RECOVERY TIME FRAMES

Following an interruption to the business processes for a department, resumption activities need to be focused on those processes that once lost, would significantly impact the ability to perform critical business processes. While recovering all business activities is the ultimate goal of an IT Business Continuity/Disaster Recovery Plan, critical systems and applications must be restored first to minimize the impact on essential operations. The software applications were identified and compared based on:

- Deferral period (period of time the process could be deferred) as determined by the users
- Availability of alternate processing methods such as manual procedures
- Duration (length of time) that the alternate process could be performed
- Potential litigation
- Potential revenue losses
- Operational impact
- Financial / economic impact
- Customer service
- Public safety / public health
- Regulatory / statutory impact
- Other factors

The applications identified by the RGRTA departments were assigned a rating based on the following criteria listed below:

Ranking	Description	Recovery Objectives
Critical	Application must be restored within 1 day or less	One Day or Less
Essential	Application must be restored within two days	Two Days
Important	Application can be restored after 5 or more days	Five or More Days

The tables below summarize the number of applications rated as Critical, Essential, and Important, which are based on the recovery time frames determined by each RGRTA department. Both the original BIA results and the revised BIA results are displayed in the tables below.

Original BIA Priorities and Recovery Time Frames

Priority	Recovery Time Frame	# of Applications		%
		Server	Desktop	
Critical	1 day or less	12	1	37%
Essential	2 days	1		3%
Important	5 or more days	13	8	60%
Total # Applications		35		100%

Revised BIA Priorities and Recovery Time Frames

Priority	Recovery Time Frame	# of Applications		%
		Server	Desktop	
Critical	1 day or less	12	1	37%
Essential	2 days	2		6%
Important	5 or more days	12	8	57%
Total # Applications		35		100%

Based on the input from the departments, the most critical RGRTA server applications were identified and are listed in the table below. The first column shows the original priority / recovery time frame identified for the application during the BIA process. The second column shows the revised priority / recovery time frame for each application which was determined during follow-up meetings.

	Application	Original Priority	Revised Priority
1.	ACS (all modules)	Critical	Critical
2.	Highline	Critical	Critical
3.	Trapeze Suite	Critical	Critical
4.	Fleet Maintenance (AS/400)	Critical	Essential
5.	Logic Tree	Critical	Essential
6.	Ramco Financial Suite	Critical	Essential
7.	Symposium	Critical	Essential
8.	APCs	Critical	Important
9.	Charter	Critical	Important
10.	Luminator / Twin Vision	Critical	Important
11.	Petro-Vend	Critical	Important
12.	Pictometry	Critical	Important

The most critical RGRTA server applications have been identified as:

- ACS (all modules)
- Highline
- Trapeze Suite

Now that the critical applications have been identified, recovery strategies need to be identified to allow these applications to be restored as soon as possible following an interruption to the operations of the Authority. Recovery strategy recommendations are identified in Section 5 of this report.

As the planning process continues, recovery strategies and procedures should be implemented for all systems and applications. The resulting Plan will ensure that the most critical applications will be recovered first.

1.4 REVENUE IMPACT AND DEPARTMENT INTERDEPENDENCIES

Revenue Impact

The departments identified if there was the potential for revenue impact to the Authority if the applications were unavailable to support the business processes. The Call Center indicated that there may be potential revenue impact related to the inability to process vendor orders and added expense in overtime costs and additional staffing. Finance and Accounting indicated that a delay in operations would cause all operating revenues to cease. Other RGRTA departments indicated that an outage to the systems may result in the loss of operational efficiency and inferior customer service which could have significant revenue impact.

Department Interdependencies

The results of the BIA indicate that the departments could be dependent on each other for inputs and outputs related to the applications that support their business processes. An outage in some systems may impact both the primary users and RGRTA departments that are dependent on the outputs of the primary users. In addition, the Authority sends and receives and sends information to and from external agencies including the State of New York and other third parties.

A summary of the potential revenue impact and department interdependencies is located in Section 4 of this report.

1.5 DISASTER RECOVERY PLANNING RECOMMENDATIONS

There has been a conscious effort on the part of the Authority to prepare for a potential disaster event and to reduce the impact of potential disaster threats. However, there are certain improvements that could further enhance the security capabilities of the Authority and ultimately minimize the impact and the related consequences of a disaster event as described below. Additional detail on these recommendations is included in Section 6 of this report.

1. Single Points of Failure

A single point of failure is defined as a single element, component, system, device, or person that is critical to providing a service. Availability is the aspect of continuity planning that is concerned with avoiding single points of failure. Any risk to the timeliness and bandwidth of the network should be thoroughly considered. The Authority has the following IT single points of failure:

- Core Switch / Router
- AS/400
- Email server
- Print and File servers
- Veritas Backup/Restore Software
- Private radio communication system
- Internet Service Provider
- Infrastructure servers
- Applications / database servers
- Telecommunication Provider
- Communication lines (T1 and fiber links)
- Voice Communication Equipment (PBX)

2. Backup and Off-site Storage Procedures

The Authority should develop written policies and procedures for backup processing and off-site storage and rotation. Additional considerations include:

- Encrypt all backup tapes in the event a backup tape is lost or stolen
- Implement a backup media log to record the movement of all backup media
- Transport the backup media in secure containers that are safe from fire, water, and dust
- Assure that the storage locations of backup media are clearly labeled and environmentally secure

3. Physical and Environmental Security

Improve the following physical and environmental controls in the data center and the backup server location:

- Use a sign in-log for all visitors
- Transport the backup media in secure and environmentally safe containers
- Send the alerts for breaches in moisture, heat, and humidity levels to the helpdesk and/or emailed to individuals so that action can be taken
- Relocate the backup server area to an area that has appropriate physical and environmental controls (Note: the implementation of the SAN will help mitigate this concern)

4. Server Recovery Procedures

Currently, the Authority does not have formal written documentation that describes the procedures for restoring their critical servers. Because RGRTA depends heavily on technology and automated systems, it is vital that written recovery procedures be developed.

1.6 RECOVERY STRATEGIES RECOMMENDATIONS

This report identifies recovery strategies for critical information technology systems, infrastructure, and facilities. The recovery strategies were formulated from information derived from the Business Impact Analysis (BIA) and best practices for the industry. The analysis focuses on identifying cost-effective options for the most critical applications and their associated information technology infrastructures used to access and support these applications.

We recommend that the Authority use an internal hot site (backup data center) with data replication or contract with a colocation service provider for the critical systems and applications. Both the internal hot site and colocation facility should be a secure facility sufficiently distanced from the primary data center location to prevent the destruction of both the primary and backup sites in the same disaster event.

Internal Hot Site

The benefits of the internal hot site approach compared to other alternatives are:

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

The major disadvantage of an internal hot site is 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 servers can be upgraded.

Colocation Service Provider

The benefits of the contracting with a colocation service provider compared to the other alternatives are:

- Lower pre-disaster costs than other recovery alternatives
- No annual subscription fees
- No declaration fees
- Faster recovery time
- No daily usage fees after a disaster
- More control over the recovery process
- Lower post-disaster costs
- Easier transition to a colocation site
- Easier and less costly to test
- Ensures system compatibility

The major disadvantages of using a colocation service provider are:

- Colocation service providers may be difficult to locate within a reasonable distance from RGRTA. Travel may be required.
- Costs (i.e., rental fees and connection charges) may fluctuate due to the amount of data being transferred via the server(s) each month. A sudden burst to a higher transfer rate may increase the monthly connection charge (depending on how the cost is calculated).

SAN (Storage Area Network)

To guarantee complete rapid data access recovery in a disaster, dual, redundant SANs should be deployed, one a mirror of the other and each in separate locations. A backup SAN should be located at the internal hot site. The two SAN's would be connected by high-speed fiber and replication would occur on a real time basis. This would eliminate the need to replace the SAN and restore from backup during a disaster situation, speeding the recovery of critical applications identified by the individual departments.

Development Servers

All development servers should be relocated to the internal hot site. The development servers could be used as production servers if a disaster disabled the primary servers at the primary data center location. The Authority should verify that the configurations of the development servers are adequate for the potential use as failover devices.

1.7 IT BUSINESS CONTINUITY/DISASTER RECOVERY PLAN (NEXT PHASE)

The next phase of this project will include developing a comprehensive IT Business Continuity/Disaster Recovery Plan for the Authority. 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 the Authority can continue critical operations and services in a timely manner during periods of emergencies and/or disasters.

Section 6 contains an outline of the Plan and a description of the Recovery Team Structure.

PROJECT BACKGROUND

2

2.1 PROJECT OBJECTIVES

The Authority 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 an IT Business Continuity/Disaster Recovery Plan for the Authority to protect its services and operations.

The IT Business Continuity/Disaster Recovery 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, IT Business Continuity/Disaster Recovery 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 PROJECT BENEFITS

Our proven approach will result in a comprehensive IT Business Continuity/Disaster Recovery plan for the Authority. The benefits of preparing a workable IT Business Continuity/Disaster Recovery plan are:

Time Frame	Benefit 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 business processes✓ Protect employees and the public✓ Safeguard critical assets✓ Minimize confusion and delays
After A Disaster Event	<ul style="list-style-type: none">✓ Reduce potential financial loss✓ Decrease potential legal liability✓ Continue critical operations and services✓ Ensure organizational stability and an orderly recovery✓ Adhere to legal, statutory and regulatory requirements

2.3 PROJECT METHODOLOGY

To accomplish the objectives of this IT Business Continuity/Disaster Recovery Planning engagement at the Authority, we are using a multi-phased approach that includes:

Business Impact Analysis

A business impact analysis (BIA) involves identifying the critical application systems within the Authority and determining the impact of not performing the related business processes beyond the maximum acceptable outage. The Application BIA Analysis Questionnaires that were used to gather this information are included in Section 4.

Business recovery is a concern of the entire organization, not just the computer system. The critical allocation systems were identified within all the RGRTA departments.

Recovery Strategies

Important aspects of contingency planning are to determine recovery strategies and develop agreements related to the most feasible alternative(s). Numerous unpredictable and often unpreventable hazards can endanger the organization. Because of these threats, recovery alternatives for critical ITS hardware, software, infrastructure, and facilities will be evaluated and recommended.

The results of the Business Impact Analysis (BIA) will facilitate this evaluation. This phase of the process will focus on cost-effective recovery strategies for critical IT resources.

Plan Development

A well-organized contingency plan will directly affect the recovery capabilities of the Rochester-Genesee Regional Transportation Authority. 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.

Training and Testing

It is essential to provide training for all team members and other appropriate personnel at the Authority. In addition, the plan should be thoroughly tested and evaluated on a regular basis (at least annually). The test will provide the Authority 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 the organization to recover
- Providing motivation for maintaining and updating the IT Business Continuity/Disaster Recovery Plan

DISASTER RECOVERY RECOMMENDATIONS

3.1 OVERVIEW

The following disaster recovery recommendations are described below:

- Single Points of Failure
- Backup and Off-Site Storage Procedures
- Physical and Environmental Security

3.2 SINGLE POINTS OF FAILURE

A single point of failure is defined as a single element, component, system, device, or person that is critical to providing a service. Availability is the aspect of continuity planning that is concerned with avoiding single points of failure. Any risk to the timeliness and bandwidth of the network should be thoroughly considered. In the review of the Authority's computing architecture, we identified that the Authority has the following single points of failure:

- Core Switch / Router
- AS/400
- Email server
- Print and File servers
- Veritas Backup/Restore Software
- Private radio communication system
- Internet Service Provider
- Infrastructure servers
- Applications / database servers
- Email server
- Communication lines (T1 and fiber links)
- Voice Communication Equipment (PBX)

We recommend that the following systems be replicated at the internal hot site or the collocation service provider:

Infrastructure Systems

- DNS/ Active Directory
- LDAP
- Network Connectivity
- Print Services
- DHCP
- ISP Failover
- Internet / Intranet

Data Storage Systems

- File Server Storage
- Veritas Backup/Restore Software

Critical User Applications

- ACS (all modules)
- Highline
- Trapeze Suite

Development Servers

All development servers should be relocated to the internal hot site. The development servers could be used as production servers if a disaster disabled the servers at the data center. The Authority should verify that the configurations of the development servers are adequate for the potential use as failover devices.

3.3 BACKUP PROCEDURES AND OFFSITE STORAGE

Backup Procedures

It is crucial to have backup files stored offsite in the event the system is destroyed or inadvertently modified. Without proper backup and recovery capabilities, the Authority could incur significant disruption and expense. We have the following observations and recommendations regarding offsite storage of backup files.

We recommend that all backup procedures and off-site rotation procedures be formalized in writing. The Authority's backup strategy should be reviewed to ensure that data is backed up on a regular basis, that backup data and software is stored securely offsite and that adequate recovery plans are in place.

Backup procedures should include but not be limited to the following:

- Which file systems are backed up
- How often backups are performed
- How often storage media is rotated
- How often backups are stored off site
- How storage media is labeled and documented
- How often the backup server is backed up and its tapes taken off site
- Who should be taking the tapes off site
- Time of processing day the tapes are taken off site
- How often backup tapes are tested to make sure they can be read
- How often data compares are done on the tapes
- Database integrity checks should be done after a restore is performed
- Use of an courier service and off-site storage vendor

All operating systems, system patches and service packs, backup software, and production software should be backed up to CD or tape on a regular basis and stored at the secure off-site location. If a disaster occurs, the operating systems, patches and service packs along with the tape backup software will have to be installed on a new server before obtaining the ability to restore other software and data. Ensuring that the necessary software media (CDs and tapes) are available off-site will minimize downtime if the systems need to be restored.

We also recommend the following improvements related to the current backup and off-site storage strategies:

- Encrypt all backup media. In the event backup media is lost or stolen, this security measure should considerably reduce or eliminate chances of unauthorized information disclosure.
- Maintain a movement log for all backup media. At a minimum, the log should include the following information:
 - Backup media ID
 - Cycle
 - Media
 - Quantity received
 - Date / Time of the movement
 - Description
 - Quantity sent
 - Employee name

The log should be reviewed on a periodic basis and used to conduct physical inventories of backup media at each location. The Authority should conduct periodic audits of offsite storage. The log should be reviewed and used to perform a physical inventory to determine if the backup and offsite storage process is performed properly.

- Transport the backup media in specialized containers that meet the following minimum requirements:
 - The containers should be well constructed to prevent damage to contents if dropped, and provide added protection against humidity, dust and water.
 - Container should be locked, requiring either a physical key or a combination lock code for access. The container should be locked at all times when in transit.
 - Anti-static foam rubber case interior.
 - Electromagnetic interference (EMI) shielding for vital backup media.
 - Temperature protection.
 - Numbered, tamper-evident security seals
- At a minimum, each backup location should adhere to the following requirements:
 - Backup media cabinets, shelves, and storage bins should be clearly labeled.
 - Scratch tapes should not be stored in the same cabinets as the tapes currently in rotation.
 - Closed cabinets should be used to provide protection from water damage if the locations use water as fire suppression
- The Authority should also assure that the following items are also stored offsite:
 - Licenses/Registration Numbers
 - Media Keys for all applications
 - PC Images
 - Critical forms, supplies and documentation

3.4 PHYSICAL AND ENVIRONMENTAL SECURITY

Physical security is the important protection of the information processing equipment from damage, destruction or theft; information processing facilities from damage, destruction or unauthorized entry; and personnel from potentially harmful situations. Therefore physical security measures provide the tools used to physically protect the information assets against deliberate and/or accidental threats. In addition, datacenter facilities need to be equipped with adequate environmental controls to maintain systems and data, including fire suppression, uninterrupted power service (UPS), and appropriate air conditioning.

We have the following recommendations regarding physical and environmental security for both the main data center and the backup server area.

Main Data Center

- Implement the use of a sign-in log to record all visitors.
- Ensure environmental alerts for breaches in moisture, heat, and humidity levels be sent to the helpdesk and/or emailed to individuals so that appropriate action can be taken quickly.

Backup Server area

- Relocate the backup server to a secure location that has appropriate physical and environmental controls.
- Installing fire suppression equipment (i.e., fire extinguishers)
- Discontinue using this area as a storage location for non-IT related items.
- Raise equipment off the floor.
- Improve HVAC needs

3.5 SERVER RECOVERY PROCEDURES

Currently, the Authority does not have formal written documentation that describes the procedures for restoring their critical servers. Because the Authority depends heavily on technology and automated systems, it is vital that written recovery procedures be developed.

To facilitate and streamline the documentation process, forms should be designed and used as data gathering tools (refer to Exhibit B – Server Recovery Form). These forms should be completed for all critical systems. Items to consider in developing the technical recovery procedure format include the following:

- Server Name
- IT Department Contact
- Server Type
- Operating System
 - Name
 - Version
 - Patches Applied
- Hardware
 - CPU ▪ Disk
 - Processor ▪ Capacity
 - Memory ▪ Other
- Reconstruction procedures
 - Base operating system installation ▪ Operating system configuration settings
 - Operating system patches/service packs ▪ Special host services and support/monitoring applications

OUTAGE IMPACT ANALYSIS

4.1 OVERVIEW

A key aspect of the Business Impact Analysis involved identifying the critical applications within each department and determining the impact of not performing the business process related to that application beyond the maximum acceptable outage. The following eleven departments assisted with this effort by completing comprehensive BIA Application Analysis Questionnaires:

#	RGRTA Department
1.	Call Center
2.	Executive
3.	Finance and Accounting
4.	Human Resources
5.	Legal Affairs
6.	Lift Line & Regionals
7.	Maintenance
8.	Marketing
9.	RTS Operations
10.	Procurement and Grants Administration
11.	Scheduling

The applications each department identified as required to support their business operations and processes are listed below. The Application BIA Data Collection Forms that were completed by the RGRTA Departments participating in the BIA process can be found in Section 7 of this report.

1. Call Center

- Business Objects
- Charter
- Logic Tree
- Microsoft Office
- Symposium
- Tooty
- Trapeze Suite

2. Executive

- Adobe Reader 8
- Microsoft – Excel
- Microsoft – Outlook
- Microsoft – Project
- Windows Media Player
- Microsoft – Word
- Citrix
- AS/400
- Microsoft – Power Point
- Microsoft Publisher
- WinZip

3. Finance and Accounting

- RAMCO Financial Suite

4. Human Resources

- Charter
- Highline Payroll/HR System
- RAMCO Financial Suite

5. Legal Affairs

- Adobe Acrobat
- Citrix
- Highline Payroll/HR System
- Microsoft Office
- Nero
- RAMCO Financial Suite
- Charter
- Dragon Speech Dictation System
- Lenel Camera System
- Outlook Add-in
- Pictometry

6. Lift Line & Regionals

- ArcView
- Highline Payroll/HR System
- Microsoft Publisher
- RAMCO Financial Suite
- Trapeze Pass
- Citrix
- Microsoft Office
- Pictometry
- Trapeze Customer Care

7. Maintenance

- AS/400
- Fleetwatch
- Kronos
- Microsoft Outlook
- Microsoft Visio
- Paner
- Crystal Reports
- Highline Payroll/HR System
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Word
- RAMCO Financial Suite

8. Marketing

- Adobe Programs
- Microsoft Office
- Microsoft Outlook

9. RTS Operations

- AS/400
- Highline Payroll/HR System
- Microsoft Office
- Orbital Science (ACS)
- Pictometry
- Charter
- Lenel Camera System
- Nice Racal Mirra
- Petro Vend
- Trapeze OPS

10. Procurement and Grants Administration

- Adobe Acrobat
- Microsoft Outlook
- RAMCO Financial Suite
- Veeder-Root Fuel Management and Leak Detection
- Microsoft Excel
- Microsoft Word
- Trapeze (Ride-Pro Car Pool Matching Software)

11. Scheduling

- AS/400
- APC's
- Luminator/Twin Vision
- Trapeze FX
- ArcView GIS
- Charter
- Orbital (ACS)

4.2 APPLICATION PRIORITIES AND RECOVERY TIME FRAMES

Following an interruption to the business processes for a department, resumption activities need to be focused on those processes that once lost, would significantly impact the ability to perform critical business processes. While recovering all business activities is the ultimate goal of a Business Continuity Plan, critical systems and applications must be restored first to minimize the impact on essential operations. The software applications were identified and compared based on:

- Deferral period (period of time the process could be deferred) as determined by the users
- Availability of alternate processing methods such as manual procedures
- Duration (length of time) that the alternate process could be performed
- Potential litigation
- Potential revenue losses and/or revenue deferral during and after the deferral period
- Economic impact
- Statutory impact
- Operational impact
- Other factors

All of the systems used by the Authority were assigned a rating based on the following criteria:

Critical = System to be restored **in 1 day or less**

Essential = System to be restored **within 2 days**

Important = System to be restored **after 5 or more days**

The tables below summarize the number of applications rated as Critical, Essential, and Important, which are based on the recovery time frames determined by each RGRTA department. Both the original BIA results and the revised BIA results are displayed in the tables below.

Original BIA Priorities and Recovery Time Frames

Priority	Recovery Time Frame	# of Applications		%
		Server	Desktop	
Critical	1 day or less	12	1	37%
Essential	2 days	1		3%
Important	5 or more days	13	8	60%
Total # Applications		35		100%

Revised BIA Priorities and Recovery Time Frames

Priority	Recovery Time Frame	# of Applications		%
		Server	Desktop	
Critical	1 day or less	12	1	37%
Essential	2 days	2		6%
Important	5 or more days	12	8	57%
Total # Applications		35		100%

OUTAGE IMPACT ANALYSIS

Based on input from the RGRTA departments, the most critical server applications were identified. The table below lists those applications, the recovery time frame / priority identified during the BIA process and the revised recovery time frame / priority that was re-evaluated and determined during subsequent follow-up meetings:

	Application	Original Priority	Revised Priority
1.	ACS (all modules)	Critical	Critical
2.	Highline	Critical	Critical
3.	Trapeze Suite	Critical	Critical
4.	Fleet Maintenance (AS/400)	Critical	Essential
5.	Logic Tree	Critical	Essential
6.	Ramco Financial Suite	Critical	Essential
7.	Symposium	Critical	Essential
8.	APCs	Critical	Important
9.	Charter	Critical	Important
10.	Luminator / Twin Vision	Critical	Important
11.	Petro-Vend	Critical	Important
12.	Pictometry	Critical	Important

The most critical RGRTA server applications are identified below:

- ACS (all modules)
- Highline
- Trapeze Suite

4.3 CYCLE AND VOLUME

Each department identified the Cycle (frequency) and the Volume (level of services required to sustain operations). This information is summarized below.

#	Department / Application Name	Cycle	Volume
1.	Call Center		
	Business Objects	Weekly	5 – 6 times per week
	Charter	Daily	Continuously
	Logic Tree	Daily	Constant
	Microsoft Office	Daily	Continuously
	Symposium	Daily	Continuously
	Tooty	Quarterly	20 – 30 times per quarter
	Trapeze	Daily	Continuously
2.	Executive		
	Adobe Reader 8	Monthly	Several times per month
	AS/400	Monthly	1 – 3 times per month
	Citrix	Weekly	Several times per week
	Microsoft Excel	Weekly	6 – 12 times per week
	Microsoft Outlook	Daily	Constantly
	Microsoft PowerPoint	Monthly	Once per month
	Microsoft Project	Daily	1 – 3 times a day
	Microsoft Publisher	Infrequent	Infrequent
	Microsoft Word	Daily	6 – 12 times per day
	Windows Media Player	Monthly	Several times per month
	WinZip	Infrequent	Infrequent
	3.	Finance and Accounting	
RAMCO Financial Suite		Daily	Approximately 175 daily
4.	Human Resources		
	Charter	Daily	Daily
	Highline Payroll/HR System	Daily	Continuously
	RAMCO Financial Suite	Monthly	2 – 3 times per month

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Cycle	Volume
5.	Legal Affairs		
	Adobe Acrobat	Daily	Multiple times
	Charter	Daily	1 – 2 times
	Citrix	Weekly	3 – 4 times
	Dragon Speech Dictation System	Daily	Multiple times
	Highline Payroll/HR System	Daily	3 – 5 times
	Lenel Camera System	Monthly	10 times
	Microsoft Office	Daily	Heavy use
	Microsoft Outlook Add-in	Daily	Multiple times
	Nero	Weekly	1 – 2 times
	Pictometry	Monthly	2 times
	RAMCO Financial Suite	Daily	Multiple times
6.	Lift Line and Regionals		
	ArcView	Monthly	Once per month
	Citrix	Weekly	5 times per week
	Highline Payroll/HR System	Weekly	Once per week
	Microsoft Office	Daily	Heavy use
	Microsoft Publisher	Quarterly	Once every several months
	Pictometry	Bi-Weekly	Once every other week
	RAMCO Financial Suite	Daily	All day in Parts Department
	Trapeze Customer Care	Weekly	Weekly
	Trapeze Pass	Daily	All day long scheduling department
7.	Maintenance		
	AS/400	Daily	3 times daily
	Crystal Reports	Weekly	Once daily
	Fleetwatch	Daily	Once daily
	Highline Payroll/HR System	Daily	13 times daily
	Kronos	Daily	13 times daily
	Microsoft Excel	Daily	Continuous
	Microsoft Outlook	Daily	20 times daily
	Microsoft PowerPoint	Monthly	3 times daily
	Microsoft Visio	Weekly	Once daily
	Microsoft Word	Daily	Continuous

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Cycle	Volume
	Paner	Daily	Once daily
	RAMCO Financial Suite	Daily	2 times daily
8.	Marketing		
	Adobe Programs	Daily	All day
	Microsoft Office	Daily	All day
	Microsoft Outlook	Daily	All day
9.	RTS Operations		
	AS/400	Daily	Frequently – critical system
	Charter	Daily	Frequently
	Highline Payroll/HR System	Daily	High Volume
	Lenel Camera System	Daily	Frequently – continuous monitoring, potential for playback
	Microsoft Office	Daily	Frequently
	Nice Racal Mirra	Daily	Continuous recording
	Orbital Science (ACS)	Daily	High volume
	Petro Vend	Daily	Continuous
	Pictometry	Infrequent	Infrequent
	Trapeze OPS	Daily	Frequently
10.	Procurement and Grants Administration		
	Adobe Acrobat	Daily	20 times daily
	Microsoft Excel	Daily	10 – 12 times daily
	Microsoft Outlook	Daily	100's of times daily
	Microsoft Word	Daily	20 – 30 times daily
	RAMCO Financial Suite	Daily	100's of transactions daily
	Trapeze (Ride-Pro Car Pool Matching Software)	Daily	12 times daily
	Veeder (Root Fuel Management and Leak Detection)	Daily	Once daily

#	Department / Application Name	Cycle	Volume
11.	Scheduling		
	APC's	Daily	Several times per day
	ArcView GIS	As needed	As needed
	AS/400	Daily	1 time daily – sometimes more
	Charter	Monthly	Once a month or so
	Luminator/Twin Vision	Quarterly	1 Week each quarter
	Orbital (ACS)	Daily	Depends
	Trapeze FX	Daily	Constantly

4.4 OUTAGE IMPACT LEVELS

We worked with the RGRTA departments to determine the impact of not performing their business processes based on an outage of the related application system. The impact levels (of not performing the business processes) were assigned in the categories of department operations, Financial/Economic, Customer Service, Public Safety/Public Health and Statutory/Regulatory using ratings of *Severe*, *Moderate*, *Minor*, and *Not Applicable*. The tables presented below provide the individual department results of these ratings.

#	Department / Application	Department Operations	Financial/Economic	Customer Service	Public Safety/Public Health	Statutory/Regulatory
1.	Call Center					
	Business Objects	Moderate	Minor	Moderate	Moderate	Minor
	Charter	Severe	Severe	Severe	Severe	Severe
	Logic Tree	Severe	Moderate	Severe	Minor	Minor
	Microsoft Office Suite	Severe	Severe	Severe	Minor	Minor
	Symposium	Severe	Severe	Severe	Minor	Severe
	Tooty	Moderate	N/A	Minor	N/A	N/A
	Trapeze	Severe	Severe	Severe	N/A	Minor
2.	Executive					
	Adobe Reader 8	Minor	N/A	N/A	N/A	N/A
	AS/400	Minor	N/A	N/A	N/A	N/A
	Citrix	Severe	N/A	Minor	N/A	N/A
	Microsoft Excel	Moderate	Moderate	Moderate	Minor	Minor
	Microsoft Outlook	Severe	Severe	Severe	Severe	Severe
	Microsoft PowerPoint	Minor	N/A	N/A	N/A	N/A

OUTAGE IMPACT ANALYSIS

#	Department / Application	Department Operations	Financial/Economic	Customer Service	Public Safety/Public Health	Statutory/Regulatory
	Microsoft Project	Severe	Moderate	Minor	N/A	N/A
	Microsoft Publisher	Minor	N/A	N/A	N/A	N/A
	Microsoft Word	Severe	Moderate	Moderate	Minor	Minor
	Windows Media Player	Minor	N/A	N/A	N/A	N/A
	WinZip	Minor	N/A	N/A	N/A	N/A
3.	Finance and Accounting					
	RAMCO Financial Suite	Severe	Severe	Severe	Moderate	Severe
4.	Human Resources					
	Charter	Moderate	Minor	Severe	Moderate	Minor
	Highline Payroll/HR System	Severe	Moderate	Minor	N/A	Severe
	RAMCO Financial Suite	Minor	Moderate	N/A	N/A	Minor
5.	Legal Affairs					
	Adobe Acrobat	Moderate	Minor	N/A	N/A	N/A
	Charter	Moderate	Minor	Moderate	Moderate	N/A
	Citrix	Minor	Minor	N/A	N/A	N/A
	Dragon Speech Dictation	N/A	N/A	N/A	N/A	Moderate
	Highline Payroll/HR System	Moderate	Minor	N/A	N/A	N/A
	Lenel Camera System	Moderate	Moderate	N/A	N/A	N/A
	Microsoft Office	Severe	Severe	Severe	N/A	Moderate
	Nero	Minor	Minor	N/A	N/A	N/A
	Outlook Add-in	N/A	N/A	N/A	N/A	N/A
	Pictometry	N/A	N/A	N/A	N/A	N/A
	RAMCO Financial Suite	Moderate	Severe	N/A	N/A	Moderate
6.	Lift Line & Regionals					
	ArcView	Minor	N/A	N/A	N/A	N/A
	Citrix	Minor	N/A	N/A	N/A	N/A
	Highline Payroll/HR System	Severe	Severe	N/A	N/A	N/A
	Microsoft Office	Severe	Moderate	Moderate	N/A	Minor
	Microsoft Publisher	N/A	N/A	N/A	N/A	N/A
	Pictometry	Minor	N/A	Minor	Minor	Minor
	RAMCO Financial Suite	Severe	Moderate	N/A	Minor	Minor

OUTAGE IMPACT ANALYSIS

#	Department / Application	Department Operations	Financial/Economic	Customer Service	Public Safety/Public Health	Statutory/Regulatory
	Trapeze Customer Care	Moderate	N/A	Moderate	N/A	Minor
	Trapeze Pass	Severe	Moderate	Severe	Moderate	Severe
7.	Maintenance					
	AS/400	Minor	Minor	Minor	Moderate	Moderate
	Crystal Reports	Minor	Minor	Minor	Minor	Minor
	Fleetwatch	Minor	Minor	Minor	Minor	Minor
	Highline Payroll/HR System	Minor	Minor	Minor	Minor	Minor
	Kronos	Minor	Minor	Minor	Minor	Minor
	Microsoft Excel	Minor	Minor	Minor	Minor	Minor
	Microsoft Outlook	Minor	Minor	Minor	Minor	Minor
	Microsoft PowerPoint	Minor	Minor	Minor	Minor	Minor
	Microsoft Visio	Minor	Minor	Minor	Minor	Minor
	Microsoft Word	Minor	Minor	Minor	Minor	Minor
	Paner	Minor	Minor	Minor	Minor	Minor
	RAMCO Financial Suite	Minor	Minor	Minor	Minor	Minor
8.	Marketing					
	Adobe Programs	N/A	Moderate	N/A	N/A	N/A
	Microsoft Office	Moderate	Moderate	Minor	N/A	N/A
	Microsoft Outlook	Severe	N/A	Severe	Severe	N/A
9.	RTS Operations					
	AS/400	Severe	Severe	Severe	Moderate	Moderate
	Charter	Moderate	Minor	Severe	Minor	Minor
	Highline Payroll/HR System	Severe	Moderate	Minor	N/A	Severe
	Lenel Camera System	Minor	Moderate	N/A	Severe	Moderate
	Microsoft Office	Severe	Severe	Severe	Minor	Minor
	Nice Racal Mirra	Moderate	Moderate	Minor	Moderate	Moderate
	Orbital Science (ACS)	Severe	Severe	Severe	Severe	Severe
	Petro Vend	Moderate	Minor	Moderate	Moderate	N/A
	Pictometry	Minor	N/A	N/A	Minor	N/A
	Trapeze Ops	Severe	Severe	Severe	Moderate	Moderate

OUTAGE IMPACT ANALYSIS

#	Department / Application	Department Operations	Financial/Economic	Customer Service	Public Safety/Public Health	Statutory/Regulatory
10.	Procurement and Grants Administration					
	Adobe Acrobat	Minor	Minor	Minor	N/A	N/A
	Microsoft Excel	Moderate	Minor	Minor	Minor	Minor
	Microsoft Outlook	Moderate	Moderate	Minor	Minor	N/A
	Microsoft Word	Severe	Moderate	Minor	N/A	Minor
	RAMCO Financial Suite	Moderate	Moderate	Minor	N/A	N/A
	Trapeze Ride-Pro Car Pool Matching Software	Severe	N/A	Moderate	N/A	N/A
	Veeder-Root Fuel Management and Leak Detection System	Moderate	Minor	N/A	Minor	Minor
11.	Scheduling					
	APCs	Severe	Moderate	N/A	N/A	Severe
	ArcView	Minor	N/A	Severe	N/A	N/A
	AS/400	Severe	Severe	Severe	N/A	N/A
	Charter	Minor	N/A	Severe	N/A	N/A
	Luminator/ Twin Vision	Severe	N/A	Severe	N/A	N/A
	Orbital (ACS)	Severe	Moderate	Severe	N/A	N/A
	Trapeze FX	Severe	Severe	Severe	N/A	Severe

The impact levels (of not performing the business processes if systems were not available due to an outage) are difficult to quantify since they are dependent upon a number of factors that could include, but are not limited to:

- Time of day, week, or month that the disaster occurs
- Extent of damages to IT equipment and facilities
- Damages to the facilities
- Damages to utilities
- Extent of damages to the surrounding city or area

In addition, we have observed that most departments would suffer a significant loss in productivity due to a high level of reliance on automated systems to perform their business processes.

4.5 APPLICATION ANALYSIS

The following information was gathered and analyzed for each software application:

- Availability of Alternate Processing Methods such as manual procedures
- Duration (length of time) that the alternate process could be performed
- Potential Litigation
- Maximum Outage (period of time the business process that uses the application could be deferred) as determined by the users

The departments identified if there is an alternate processing method that could be used if the application was not available to perform critical business operations. The departments also identified if there is the possibility for potential litigation as a result of the applications not being available.

#	Department/Application Name	Alternate Processing Method		Duration (Time)	Potential Litigation	Maximum Outage
		Yes	No			
1.	Call Center					
	Business Objects		No		Yes	5 or more days
	Charter		No		Yes	2 days
	Logic Tree	Yes		Depending on personnel available	No	1 day or Less
	Microsoft Office		No		No	2 days
	Symposium		No		Yes	1 day or Less
	Tooty		No		No	5 or more days
	Trapeze	Yes		½ Day	Yes	1 day or less
2.	Executive					
	Adobe Reader 8		No		No	5 or more days
	AS/400		No		No	5 or more days
	Citrix		No		Yes	5 or more days
	Microsoft Excel		No		Yes	5 or more days
	Microsoft Outlook		No		Yes	1 day or Less
	Microsoft PowerPoint		No		No	5 or more days
	Microsoft Project		No		Yes	5 or more days
	Microsoft Publisher		No		No	5 or more days
	Microsoft Word		No		Yes	1 day or less
	Windows Media Player		No		No	5 or more days
	WinZip		No		No	5 or more days

OUTAGE IMPACT ANALYSIS

#	Department/Application Name	Alternate Processing Method		Duration (Time)	Potential Litigation	Maximum Outage
		Yes	No			
3.	Finance and Accounting					
	Ramco Financial Suite		No		Yes	1 day or less
4.	Human Resources					
	Charter	Yes		Indefinitely	No	5 or more days
	Highline Payroll/HR System	Yes		1 week	Yes	1 day or less
	RAMCO Financial Suite	Yes		Indefinitely	No	5 or more days
5.	Legal Affairs					
	Adobe Acrobat	Yes		Indefinitely	No	5 or more days
	Charter	Yes		Indefinitely	No	5 or more days
	Citrix	Yes		Indefinitely	No	5 or more days
	Dragon Speech Dictation System	Yes		Indefinitely	No	5 or more days
	Highline Payroll/HR System	Yes		Indefinitely	No	5 or more days
	Lenel Camera System	Yes		Indefinitely	No	5 or more days
	Microsoft Office		No		No	1 day or less
	Microsoft Outlook Add-in	Yes		Indefinitely	No	5 or more days
	Nero		No		No	5 or more days
	Pictometry	Yes		Indefinitely	No	5 or more days
	RAMCO Financial Suite	Yes		7 days	No	5 or more days
6.	Lift Line and Regionals					
	ArcView		No		No	5 or more days
	Citrix		No		No	5 or more days
	Highline Payroll/HR System		No		No	5 or more days
	Microsoft Office		No		No	1 day or Less
	Microsoft Publisher		No		No	5 or more days
	Pictometry	Yes		Indefinitely	No	5 or more days
	RAMCO Financial Suite		No		Yes	5 or more days
	Trapeze Customer Care	Yes		Indefinitely	No	5 or more days
	Trapeze Pass		No	None	Yes	1 day or less

OUTAGE IMPACT ANALYSIS

#	Department/Application Name	Alternate Processing Method		Duration (Time)	Potential Litigation	Maximum Outage
		Yes	No			
7.	Maintenance					
	AS/400		No		No	2 days
	Crystal Reports		No		Yes	5 or more days
	Fleetwatch		No		No	5 or more days
	Highline Payroll/HR System		No		Yes	1 day or less
	Kronos	Yes		7 days	Yes	5 or more days
	Microsoft Excel		No		Yes	5 or more days
	Microsoft Outlook	Yes		7 days	No	5 or more days
	Microsoft Visio		No		Yes	5 or more days
	Microsoft Word		No		Yes	5 or more days
	Microsoft PowerPoint		No		Yes	5 or more days
	Paner		No		Yes	5 or more days
	RAMCO Financial Suite		No		Yes	5 or more days
8.	Marketing					
	Adobe Programs	Yes		Indefinitely	No	5 or more days
	Microsoft Office	Yes		Indefinitely	No	1 day or less
	Microsoft Outlook	Yes		Indefinitely	No	1 day or less
9.	RTS Operations					
	AS/400	Yes		Limited	Yes	1 day or less
	Charter	Yes			Yes	5 or more days
	Highline Payroll/HR System	Yes		Unknown	Yes	1 day or less
	Lenel Camera System				Yes	5 or more days
	Microsoft Office		No		No	5 or more days
	Nice Racal Mirra		No		Yes	1 day or less
	Orbital Science (ACS)		No		Yes	1 day or less
	Petro Vend		No		No	1 day or less
	Pictometry	Yes			No	5 or more days
	Trapeze OPS	Yes		1 week	Yes	1 day or less

#	Department/Application Name	Alternate Processing Method		Duration (Time)	Potential Litigation	Maximum Outage
		Yes	No			
10.	Procurement and Grants Administration					
	Adobe Acrobat	Yes		1 week	No	5 or more days
	Microsoft Excel	Yes		7 days	No	5 or more days
	Microsoft Outlook	Yes		1 week	No	5 or more days
	Microsoft Word	Yes		1 day	No	1 day or less
	RAMCO Financial Suite	Yes		1 day	No	1 day or less
	Trapeze (Ride-Pro Car Pool Matching Software)		No		No	5 or more days
	Veeder (Root Fuel Management and Leak Detection)	Yes		1 week	Yes	5 or more days
11.	Scheduling					
	APC's		No		No	1 day or less
	ArcView GIS		No		No	2 days
	AS/400		No		No	1 day or less
	Charter		No		No	5 or more days
	Luminator/Twin Vision		No		No	1 day or less
	Orbital (ACS)		No		No	1 day or less

4.6 REVENUE IMPACT AND DEPARTMENT INTERDEPENDENCIES

Revenue Impact

The departments identified if there was the potential for revenue impact to the Authority if the applications were unavailable to support the business processes. The Call Center indicated that there may be potential revenue impact related to the inability to process vendor orders and added expense in overtime costs and additional staffing. Finance and Accounting indicated that a delay in operations would cause all operating revenues to cease. Other RGRTA departments indicated that an outage to the systems may result in the loss of operational efficiency and inferior customer service which could have significant revenue impact. Any daily losses may not have a linear relationship with time. Losses due to the inability to perform critical business processes would more likely have a geometric relationship with time and are often compounding in nature. For example, the loss on the second day of an outage may be twice as much as the loss on the first day of the outage.

Department Interdependencies

The results of the BIA indicate that the departments could be dependent on each other for inputs and outputs related to the applications that support their business processes. An outage in some systems may impact both the primary users and RGRTA departments that are dependent on the outputs of the primary users. In addition, the Authority sends and receives information to and from external agencies including the State of New York and other third parties.

A summary of the revenue impact and department interdependencies is presented below.

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
1.	Call Center				
	Business Objects		No	Yes - TOPS report, Operations, HR	
	Charter	Yes - Orders for vendors are placed using this system		Yes - contacts are referred to other departments for response – HR, Operations, Scheduling, Claims	
	Logic Tree	Yes – Overtime costs and additional staff		Yes – Radio control after hours	
	Microsoft Office		No	Yes	
	Symposium	Yes - Lost revenue with customers not able to access information		Yes - Calls would be received by Radio Control and Front Desk	
	Tooty		No	Yes – reports may be received in timely fashion	
	Trapeze	Yes - Lost revenue from Lift Line and RTS customers not having information needed.		Yes - Scheduling, Lift Line dispatch, front desk, Radio Control	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
2.	Executive				
	Adobe Reader 8		No		No
	AS/400		No		No
	Citrix	Yes - possible		Yes - Unable to connect remotely	
	Microsoft Excel	Yes - Possible		Yes - Unable to generate inter-office and external analysis	
	Microsoft Outlook	Yes - possible		Yes - Unable to manage calendar, communicate via email, retrieve contacts, manage tasks	
	Microsoft PowerPoint		No		No
	Microsoft Project	Yes - possible		Yes - Unable to manage major projects	
	Microsoft Publisher		No		No
	Microsoft Word	Yes - Possible		Yes - Unable to generate inter-office and external correspondence	
	Windows Media Player		No		No
	WinZip		No		No

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
3.	Finance and Accounting				
	RAMCO Financial Suite	Yes - If operations shut down, all operating revenues cease		Yes - Purchasing and payment functions would be severely restricted. Payroll and HR. Customer service orders can't be processed	
4.	Human Resources				
	Charter		No	Yes - Customer Service Operations, Transportation Service, Failure to communicate system issues in a timely fashion. Finance/Ramco – customer orders can't be processed	
	Highline Payroll/HR System		No	Yes - All Employees pay checks. Timelines extended	
	RAMCO Financial Suite		No - Not revenue generating but provides gauge of financial picture		No

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
5.	Legal Affairs				
	Adobe Acrobat	Yes -- Loss of efficiency would have a minor economic impact.			No
	Charter	Yes -- Loss of efficiency would have an economic impact			No
	Citrix	Yes -- Loss of efficiency would have an economic impact			No
	Dragon Speech Dictation System		No		No
	Highline Payroll/HR System	Yes -- Loss of efficiency would have an economic impact			No

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Lenel Camera System	Yes -- The absence of video of accidents would make it more difficult to defend lawsuits and workers compensation claims and would probably result in the Authority paying more in settling and defending legal claims			No
	Microsoft Office	Yes			No
	Microsoft Outlook Add-in		No		No
	Nero		No		No
	Pictometry		No		No
	RAMCO Financial Suite		No		No
6.	Lift Line and Regionals				
	ArcView		No		No
	Citrix		No	Yes - minimal	
	Highline Payroll/HR System		No	Yes - payroll	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Microsoft Office		No	Yes. Finance, HR, Training, Leadership Team. Most department files and computer activities involve Microsoft Office programs. Most administrative functions would be affected.	
	Microsoft Publisher		No		No
	Pictometry		No		No
	RAMCO Financial Suite		No	Yes - Finance department. We would be unable to generate purchase orders which means payment to vendors would be delayed.	
	Trapeze Customer Care		No		No

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Trapeze Pass	This business process has to be performed. It is out core mission. Not performing it is not an option.		Customer service: Customer complaints would skyrocket. Communications: The potential service impact would likely generate media attention. Labor relations: The emergency nature of responding to this operational challenge could result in driver work rules being violated. Finance: Response to loss of this application would cause much overtime to be incurred.	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
7.	Maintenance				
	AS/400		No	Yes - Finance / Purchasing - budget, financial information	
	Crystal Reports		No	Yes	
	Fleetwatch		No	Yes - Finance/Purchasing - Budget, financial information, stock replenishment. Will affect Fleet maintenance PMIs.	
	Highline Payroll/HR System		No	Yes - Finance/Purchasing/HR	
	Kronos		No	Yes - Finance/HR - budget, financial information,	
	Microsoft Excel		No	Yes	
	Microsoft Outlook		No	Yes - All departments. Communication would get difficult	
	Microsoft PowerPoint		No	Yes	
	Microsoft Visio		No	Yes	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Microsoft Word		No	Yes	
	Paner		No	Yes - Finance / Purchasing - budget, financial information, stock replenishment	
	RAMCO Financial Suite		No	Yes - Finance / Purchasing - budget, financial information, stock replenishment	
8.	Marketing				
	Adobe Programs		No		No
	Microsoft Office		No	Yes - Not able to draft notices to employees.	
	Microsoft Outlook		No	Yes - Not able to draft notices to employees.	
9.	RTS Operations				
	AS/400	Yes - Inferior service could affect subsidy agreements with major customers		Yes - Impact is on core business of providing bus service—assigning operators to work.	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Charter	Yes - Moderate— system used to track regular fare media purchases by customers.		Yes - Customer Service, CEO's office-- Failure to address, track, respond to customer complaints could affect customer satisfaction.	
	Highline Payroll/HR System		No	Yes - Human Resources—Payroll, Labor Relations	
	Lenel Camera System	Yes - Impact to internal controls on cash handling.		Yes - Finance; Legal Affairs; workers comp.	
	Microsoft Office	Yes - Major loss of efficiency, productivity		Yes – same impact on all departments	
	Nice Racal Mirra	Yes - Loss due to adverse decision in claims litigation or grievance arbitration.		Yes Legal affairs— claims mgmt; workers comp; customer service; hr—labor relations.	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Orbital Science (ACS)	Yes - Severe if on-time performance impacts major subsidy customers.		Yes - Impacts data entered into orbital used for key operating measurements, "tops", etc.; communication system with bus operators. Will affect Customer service, dispatch- operations, Trapeze Ops, Scheduling, ATIS, Customer Portal	
	Petro Vend	Yes - Finance— reduced revenue from city of Rochester vehicles not using system.		Yes - Finance— reduced revenue from city of Rochester vehicles not using system.	
	Pictometry		No		No
	Trapeze OPS	Yes - Inferior service could affect subsidy agreements with major customers		Yes - Impact is on core business of providing bus service—assigning operators to work.	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
10.	Procurement and Grants Administration				
	Adobe Acrobat		No	Yes -PGA provides services to many departments in the Authority. PGA's inability to carry on business in a timely manner has ripple affects throughout the Authority.	
	Microsoft Excel	Yes - Loss of productivity		Yes - PGA provides services to many departments in the Authority. Reduced productivity will slow PGA's ability to purchase goods and services in a timely manner	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Microsoft Outlook	Yes - Inability to carry on routine business practices in a timely manner.		Yes - PGA provides services to many departments in the Authority. PGA's inability to purchase goods and services in a timely manner has ripple affects throughout the Authority.	
	Microsoft Word	Yes - Inability to carry on routine business practices.		Yes - PGA provides services to many departments in the Authority. PGA's inability to purchase goods and services in a timely manner has ripple affects throughout the Authority.	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	RAMCO Financial Suite	Yes - Inability to carry on routine business practices in a timely manner.		Yes - PGA provides services to many departments in the Authority. PGA's inability to process purchase orders and receive delivered goods in a timely manner has ripple affects throughout the Authority.	
	Trapeze (Ride-Pro Car Pool Matching Software)		No		No
	Veeder (Root Fuel Management and Leak Detection)		No		No
11.	Scheduling				
	APC's		No	Yes – Trapeze Plan	
	ArcView GIS		No	Yes - Trip Planner and Info Agent in Customer Service Ops in dispatch Plan in scheduling	
	AS/400		No	Yes – Operations - Buses don't go out	
	Charter		No	Yes -Customer Service	

OUTAGE IMPACT ANALYSIS

#	Department / Application Name	Revenue Impact		Department Interdependencies	
		Yes	No	Yes	No
	Luminator/Twin Vision	Lost revenue from loss of fares		Yes -Operations, Customer Service - Wrong sign would not be good for customers, they would not know what bus to catch	
	Orbital (ACS)		No	Yes - Executive staff, Leadership Team reports in error	
	Trapeze FX		No	Yes - Trip Planner and Info Agent in Customer Service Ops in dispatch Plan in scheduling	

5.1 OVERVIEW

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

- Commercial hot sites
- Commercial warm sites
- Commercial cold sites
- Internal hot sites
- Colocation facilities
- Reciprocal agreements
- Vendor supplied equipment
- Quick ship arrangements
- Cooperative/consortium arrangement
- Electronic vaulting/mirroring

5.1.1 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 mirroring 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 (UPSs) 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. 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 RGRTA

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

- Hot sites are only available for a fixed period of time, usually six weeks. 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.

5.1.2 Commercial Warm Sites

A commercial warm site is a backup site that does not have mirrored 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, the Authority 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 the Authority.
- 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 RGRTA

A commercial warm site is not applicable to the Authority. The time frame necessary to restore will not meet the recovery time required by the Authority 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.

5.1.3 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 the Authority.
- 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 the Authority.

Applicability to RGRTA

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

- The time frame necessary to restore will not meet the recovery time required by the Authority.
- 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.

5.1.4 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 the Authority. 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. When planning the construction of a new facility, extra floor space could be allotted for an internal hot site. 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 could continue to provide processing for critical business processes. These processes may be provided at a reduced service level, but the service continuum would not be broken under this scenario.
- An internal hot site will reduce the impact of a disaster to the Authority.
- 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 a second site. Technical support staff would not have to set-up a completely new operating environment if one already exists.
- Support staff would generally be available at the second 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.

Applicability to RGRTA

An internal hot site is a good alternative for the Authority. It would have all the advantages listed above as well as the following:

- The Authority already has multiple locations that might be suitable for an internal hot site.
- The Authority already has operating systems that can utilize replication and mirrored sites.
- Servers that are used primarily for testing could be relocated to the internal hot to reduce the cost of a second site.
- The time frame necessary for restoration meets the requirements for the recovery time required by the Authority.
- 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 easily be available at the second site.

5.1.5 Colocation Service Provider

Another recovery strategy is to establish an agreement/contract with a colocation service provider. Colocation 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. 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 many considerations and several decisions the organization must make in order to determine the exact level of service required from a colocation service provider. A Colocation Service Provider Infrastructure Checklist is included as Exhibit C and can be used as a comprehensive tool to help determine the level of services a colocation service vendor can provide. Some additional items include:

- The colocation facility should be a secure facility 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 contracting with a colocation service provider 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.
- Equipment is located in a safe, secure and environmentally protected environment.
- Colocation reduces or eliminates fees associated with other recovery strategies (i.e., monthly subscription fees, declaration fees, daily usage fees, etc.)

Disadvantages

The disadvantages of using colocation service provider include the following:

- Colocation service providers may be difficult to locate within a reasonable distance from the Board, therefore travel may be involved.

- Costs (i.e., rental fees and connection charges) may fluctuate due to the amount of data being transferred via the server(s) each month. A sudden burst to a higher transfer rate may increase the monthly connection charge (depending on how the cost is calculated).

Applicability to RGRTA

Contracting with a colocation service provider is a good alternative for the Authority. It would have all the advantages listed above as well as the following:

- The time frame necessary for restoration meets the requirements for the recovery time required by the Board.
- Colocation of server(s) could continue to provide processing for critical business processes.

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).

5.1.6 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 RGRTA

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

- Processing resources may not be adequate to process critical applications for the Authority.
- With changing requirements, equipment and operating software may not be compatible between the reciprocal site and the Authority.
- The Authority requires systems availability 24X7, reciprocal agreements may only allow the time available for processing during the third-shift.
- Critical RGRTA systems are real-time not batch therefore off-hour processing is not available.
- There is no guarantee of availability is provided.

5.1.7 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 the Authority.

Applicability to the RGRTA

Vendor supplied equipment is not applicable to the Authority due to the following reasons:

- The time frame necessary to restore will not meet the requirements for the recovery time required by the Authority.
- 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.

5.1.8 Quick Ship Arrangements

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

In the event of a disaster, RGRTA staff would need to move to a temporary location — at another RGRTA facility or to leased space. 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 temporary 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.

Disadvantages

The disadvantages associated with this method of recovery are:

- The Authority would need to have a location available for receiving shipment of the equipment.
- 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 RGRTA applications.

Applicability to RGRTA

Quick ship arrangements are not applicable for the Authority due to the following:

- The time frame necessary to restore the critical applications will not meet the requirements for the recovery time required by the Authority.
- 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.

5.1.9 Cooperative/Consortium Arrangement

This option is similar to the internal hot site except that the facility is owned cooperatively by several organizations.

Advantages

- Shared costs.

Disadvantages

- Depending on the location of the backup facility, there could be additional costs for communications lines and equipment.
- Facility and equipment may have to be shared if a disaster affects more than one co-op member.
- Decision-making and control is by committee.
- A Cooperative/Consortium Agreement would be difficult for the Authority to implement. The resources required by RGRTA critical systems require dedicated processing. It would be difficult for the Authority to share its processing capabilities with other organizations.

Applicability to RGRTA

A Cooperative/Consortium Agreement is not applicable for the Authority. The resources required by the RGRTA critical systems will require dedicated processing. It would be difficult for the Authority to share its processing capabilities with other organizations.

5.1.10 Electronic Vaulting / Mirroring

Electronic vaulting allows the transmission of backup copies of computer data through telecommunication lines to a storage facility. The transmission can be immediate or delayed. This technique eliminates the need to physically move tapes and allows for real-time recovery. It requires high-speed communication capability.

There are three major types of electronic vaulting: online tape vaulting, remote transaction journaling, and database shadowing. All three types of electronic vaulting can reduce the time required to reconstruct applications and data at the computer recovery center and reduce the risk of loss of data due to the disaster.

Online Tape Vaulting

In this system, backup data is electronically transmitted, or vaulted, to a recovery or storage location. The computer center executes the tape backups, but instead of writing to a local tape drive, the tape channel is extended over communications lines to a recovery or storage location, where it is attached to a tape drive. This may eliminate the need to ship tapes to an off-site storage location.

Online tape vaulting requires high bandwidth. To move large amounts of data in a short period of time may require fiber or a T3 circuit. For redundancy purposes, the computer center may choose to have two T3 circuits. Although the cost of these lines is decreasing, the high cost is the major disadvantage of this approach.

Remote Transaction Journaling

This system uses the same logging procedure as that for a data base management system. (For example, the database can be restored by using the last backup and then reprocessing the database management system logs or journals.) Remote transaction journaling, in addition to creating the on-site journal, creates a second journal electronically at an off-site location. This allows the off-site location to recover the files to the point of interruption, reducing the time required to reconstruct the files and limiting the amount of information destroyed by a disaster event.

Database Shadowing

This system creates an update to the production database, journals it, and transfers it to the remote computer. At the production site, the journal record is applied to a copy of the production database.

Advantages

The advantages of electronic vaulting / mirroring include:

- Reduces recovery time
- Minimizes potential loss of data
- Reduces the need for some backup processing
- This alternative is appropriate for applications that need to be restored in a very short time period such as hours.

Disadvantages

The disadvantages of electronic vaulting/mirroring include:

- Higher cost
- Additional equipment needed

Applicability to RGRTA

Electronic vaulting / mirroring is a good alternative for the Authority. The existing WAN topology supports the throughput necessary for this type of processing.

5.2 RECOVERY STRATEGIES COMPARISON

This section contains a comparison 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.
- The recovery site is available.
- Communications equipment and lines are available to establish backup communications from the recovery site to the users.

Several *Evaluation Factors* are used to compare various recovery strategies. 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	Partially meets requirements = 3
Low = 1	Does not meet requirements = 1
Not Applicable = 0	Not Applicable = 0

RECOVERY STRATEGY RECOMMENDATIONS

The table presented below compares the following recovery strategies:

[Commercial Hot Site](#)

[Internal Hot Site \(RGRTA\)](#)

[Colocation Service Provider](#)

[Quick Ship Agreement](#)

Evaluation Factors		Recovery Strategy Options							
		Commercial Hot Site		Internal Hot Site (RGRTA)		Colocation Service Provider		Quick Ship Agreement	
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	5	15
System Compatibility	High	5	15	5	15	5	15	5	15
Security	High	5	15	5	15	5	15	0	0
Subscription Fees	Medium	1	2	5	10	1	2	0	0
Declaration Fees	Medium	1	2	5	10	1	2	0	0
Daily Usage Fees	Medium	1	2	5	10	1	2	0	0
Data Communications	High	5	15	5	15	5	15	0	0
Voice Communications	High	5	15	5	15	3	9	0	0
Availability	High	5	15	5	15	3	9	1	3
Proximity to RGRTA	Low	5	5	5	5	5	5	1	1
Transition	Medium	5	10	5	10	5	10	0	0
Technical Support Availability	High	3	9	5	15	3	9	1	3
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	3	6	0	0
Area-Wide Disaster Considerations	High	5	15	5	15	5	15	5	15
Testing Feasibility	High	5	15	5	15	3	9	1	3
Testing Cost	High	3	9	5	15	5	15	1	3
Maintenance Costs	High	3	9	3	9	3	9	5	15
Development Costs	High	3	9	3	9	3	9	5	15
Total			218		258		206		111

5.3 RELATIVE COSTS AND ESTIMATED RECOVERY TIMES

The table below compares the relative costs and estimated recovery times for various recovery strategies:

Recovery Strategy	Contract	Relative Risk	Relative Cost	Estimated Recovery Time
Commercial Hot site – With Data Replication	Yes	Minimal	Very High	4 – 8 hours
Commercial Warm Site – Without Data Replication	Yes	Minimal	High	48 – 72 hours
Internal Hot site – With Data Replication	N/A	Minimal	High	Minimal outage anticipated
Internal Hot site – Without Data Replication	N/A	Minimal	Medium	4 – 8 hours
Colocation Services	Yes	Low	Medium	Minimal outage anticipated
Quick Ship Arrangement	Yes	Low	Low	72 - 96 hours
Vendor Supplied	No	High	None	Over 120 hours
Reciprocal	No	High	None	Over 120 hours

5.4 RECOMMENDED COMPUTER RECOVERY STRATEGIES

We recommend that the Authority use an internal hot site (backup data center) with data replication or contract with a colocation service provider for the critical systems and applications. Both internal hot site and colocation facility should be a secure facility sufficiently distanced from the primary data center location to prevent the destruction of both the primary and backup sites in the same disaster event.

Internal Hot Site

The following requirements would be needed at an internal hot site:

- Power
- Internet access
- Rack space
- Telephones
- Network equipment
- HVAC
- Security
- Media backup device
- PCs

The benefits of the internal hot site approach compared to other alternatives are:

- Lower pre-disaster costs than a commercial hot site
- No annual subscription fees
- No declaration fees
- Faster recovery time
- No daily usage fees after a disaster

RECOVERY STRATEGY RECOMMENDATIONS

- Better proximity of the internal hot site for the RGRTA staff
- More control over the recovery process
- Lower post-disaster costs
- No travel required to another location
- Easier transition to an internal hot site
- Easier and less costly to test
- Ensures system compatibility
- Guaranteed availability of the internal hot site
- Extra capacity can be used for testing, upgrading, and special processing

The major disadvantage of an internal hot site is 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 servers can be upgraded.

Colocation Service Provider

The benefits of the contracting with a colocation service provider compared to the other alternatives are:

- Lower pre-disaster costs than other recovery alternatives
- No annual subscription fees
- No declaration fees
- Faster recovery time
- No daily usage fees after a disaster
- More control over the recovery process
- Lower post-disaster costs
- Easier transition to a colocation site
- Easier and less costly to test
- Ensures system compatibility

The major disadvantages of using a colocation service provider are:

- Colocation service providers may be difficult to locate within a reasonable distance from RGRTA. Travel may be required.
- Costs (i.e., rental fees and connection charges) may fluctuate due to the amount of data being transferred via the server(s) each month. A sudden burst to a higher transfer rate may increase the monthly connection charge (depending on how the cost is calculated).

SAN (Storage Area Network)

A SAN or Storage Area Network connects multiple servers to a centralized pool of disk storage. Compared to managing hundreds of servers, each with their own disks, SANs improve system administration. By treating all of RGRTA's storage as a single resource, disk maintenance and routine backups are easier to schedule and control.

To guarantee complete rapid data access recovery in a disaster, dual, redundant SANs should be deployed, one a mirror of the other and each in separate locations. A backup SAN should be located at an internal hot site. The two SAN's would be connected by high-speed fiber and replication would occur on a real time basis. This would eliminate the need to replace the SAN and restore from backup during a disaster situation, speeding the recovery of critical applications identified by the individual departments.

Hardware / Software

Hardware and software that are located at the internal hot site must be kept fully in sync with their production counterparts. This will require close coordination to ensure failover is seamless.

Development Servers

All development servers should be relocated to the internal hot site. The development servers could be used as production servers if a disaster disabled the primary servers at the data center. The Authority should verify that the configurations of the development servers are adequate for the potential use as failover devices. The costs for server hardware at the hot site 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

5.5 PC RECOVERY STRATEGIES

The most feasible recovery strategy for standard PC configurations is to acquire the PCs at the time of need. The Authority 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

5.6 TELEPHONE SYSTEM RECOVERY STRATEGIES

The Authority's telephone system consists of a Private Branch Exchange (PBX) and telephone equipment provided by Rel Comm. The PBX directs calls among internal lines and between internal lines and outside lines through the public telephone network. It switches calls between users on local lines while allowing all users to share a certain number of external phone lines. Currently, the Authority has a maintenance contract with a third-party vendor (Rel Comm) for repair and/or replacement and the T-1 telecommunication lines are maintained by Frontier Communications.

Voice communication recovery strategies are especially difficult because of the technology of voice systems and the limited recovery alternatives available. The most frequent point of failure in many voice communications systems is the communications line that is the responsibility of the vendor. The Authority depends heavily on voice communications to provide essential services to its customers; therefore backup alternatives should be evaluated and implemented. Voice communication recovery strategies could include:

Cellular Phones

Many organizations have used cellular phones for voice communications in a disaster situation. There is a chance that the local tower could be impacted by the same event. The advantages of utilizing cellular phones would include (1) they are a low cost recovery strategy and (2) key employees may already have a cell phones.

The potential disadvantages of utilizing cellular phones would be that (1) circuits could be busy during and after the disaster event; (2) cellular phones are not intended for high call volumes and (3) cellular phones could not receive calls at the original telephone number without call forwarding, and this would require a PBX.

Satellite Phones

Satellite phones are another option for voice communications. A satellite phone is a phone that receives signals directly from satellites orbiting the earth for communications purposes. Satellite phones are also known more simply as "sat phones". The communications satellite network covers most of the surface of the earth, so a satellite phone can be used to communicate over the telephone network anywhere in the world. Most satellite phones use LEO (Low Earth Orbit) satellites that orbit the earth at high speed, low altitude to provide coverage. (LEO) satellites have a minimal perceptible voice delay, compared to the noticeable time delay and echo effect of calls on geosynchronous satellites, which orbit at much higher elevations.

The advantages of satellite phones include; (1) High availability if cellular phones and landlines are not available and (2) costs have significantly decreased in the last few years. The disadvantages of satellite phones would include; (1) circuits could be busy during and after the disaster event; (2) Satellite phones are more expensive than cellular phones; (3) satellite phones are not intended for high call volumes and (4) satellite phones could not receive calls using the original telephone number without call forwarding, and this would require a PBX.

Inventory of Spare Parts

Although the existing vendor has some inventory of spare parts, another recovery strategy is to acquire additional inventory of spare parts for critical components of the PBX systems. Additional complications may arise when implementing this alternative, such as equipment obsolescence and replacement. The advantages of maintaining an inventory of spare parts would include; (1) fast recovery strategy and (2) relative low cost recovery strategy. The disadvantages of maintaining an inventory of spare parts would include; (1) cost of the spare parts; (2) requires staff with the knowledge and skills to repair the equipment; (3) not an alternative if the facility is not available and (4) only applies to repairing the equipment, not replacing the equipment.

Vendor Supplied Equipment

Many vendors will promise, in writing or verbally, that "should a disaster strike, you will receive the next PBX of comparable capability from the manufacturing line for shipment to the disaster recovery site." The major advantage of vendor-supplied equipment is that it is a minimal cost recovery strategy. The disadvantages and risks associated with this means of recovery include; (1) the equipment may obsolete and no longer be manufactured; (2) a significant delay may be experienced in identifying hardware and components, shipping them, installing them, and making them ready for operations; (3) costs could be high for expediting shipment at the time of the disaster and (4) this alternative is difficult to test.

Used PBX Equipment

The Authority could also acquire used PBX equipment to use as a spare at the time of the disaster event. The Authority would need to store the used unit at an alternate site from the primary locations so that it would be less likely that both switches would be impacted by the same disaster event. The major advantage of used PBX equipment is potentially faster recovery time and the the major disadvantage is more limited capacity compared to the existing switch.

Voice Over Internet Protocol (VoIP):

In the existing technology environment, data and voice have converged with "Voice over Internet Protocol" (VoIP) networks. In general, this means sending voice information in digital form in discrete packets rather than in the traditional circuit-committed protocols of the public switched telephone network (PSTN). When the transport is the public Internet or the Internet backbone from a major carrier, it is generally called "IP telephony" or "internet telephony." However, the terms IP telephony, Internet telephony and VoIP are used interchangeably.

IP telephony over controlled Internet backbones or an enterprise's own private network can provide quality matching that of the PSTN (Public Switched Telephone Network). All major carriers have implemented IP telephony. Over the public Internet, voice quality varies considerably; however, protocols that support quality of service (QOS) are expected in time, and this may improve.

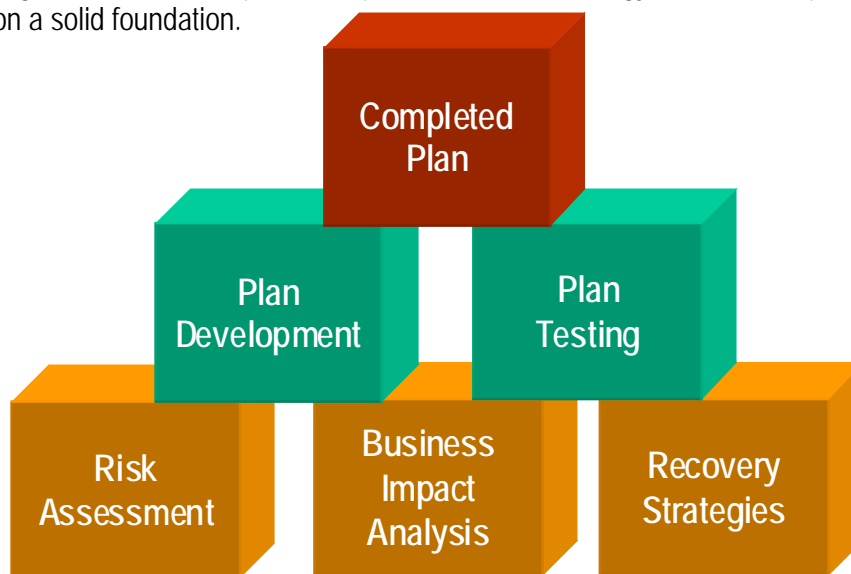
IP has become the universal transport for all voice, data and video communications worldwide. Packet networks are more scalable than traditional circuit-switched telephone networks, and they naturally integrate with all internet-based applications.

The advantages of migrating to a VoIP system include; (1) utilizing an enterprise data network to transport voice traffic, long distance costs can often be reduced if they are a major component of overall telecommunications cost; (2) utilizing the higher bandwidth of data networks, new services can be integrated with voice services, including messaging, video and collaboration/meeting utilities; (3) utilizing an enterprise data network for voice, video and data, there is no need for duplicated circuits and (4) converged networks are the direction of the future, so the marketplace will continue to evolve VoIP features and functionality.

The disadvantages of migrating to a VoIP system include; (1) utilizing the enterprise data network for voice communications, that network becomes a single point of failure that could impact both voice and data communications functionality at a work site. Therefore, redundant data network pathways need to be established to assure continuity of operations. Depending on circumstances, this can be costly; (2) critical components that provide the voice functionality across the network need to be implemented in fault-tolerant approaches to avoid wide-spread outages if a single component fails; (3) all network elements in the path need to be provided with sustainable power so that they continue to operate even if commercial power is lost and (4) the configuration and management of network elements becomes more complex as more features and configurations are added to manage voice traffic so it sustains toll-quality characteristics. This can increase the cost of equipment and the cost of training for the technical staff to support it.

6.1 OVERVIEW

The first phases of the IT Business Continuity/Disaster Recovery Planning project have been completed which included the 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 the Authority. 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 an IT Business Continuity/Disaster Recovery 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 the Authority 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 the Authority to recover
- Providing motivation for maintaining and updating the IT Business Continuity/Disaster Recovery 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 RECOVERY TEAM DEFINITIONS

We recommend that the Authority use a Recovery Team approach to structure the IT Business Continuity/Disaster Recovery Plan. The Recovery Teams are organized to address all issues related to an emergency and authorized to make certain decisions relative to recovery efforts. Because an unexpected interruption in business operations and systems may occur at any time requiring a coordinated response, each occurrence requires a managed approach that fosters consistency of effort and reduces the escalation of damage.

Each Recovery Team should have the authority to implement and accomplish the procedures contained in their section of the plan. Specific team members are assigned to manage these efforts, and the teams are also staffed with members capable of performing each task. The teams are designed to handle a specific set of tasks to be accomplished before, during, and/or after an emergency. The documented restoration procedures are intended to be in sufficient detail that in the event that specific key members are not able to participate in the recovery, other individuals who are knowledgeable in the particular operations and/or technology could, following the procedures, restore the business operations and systems involved.

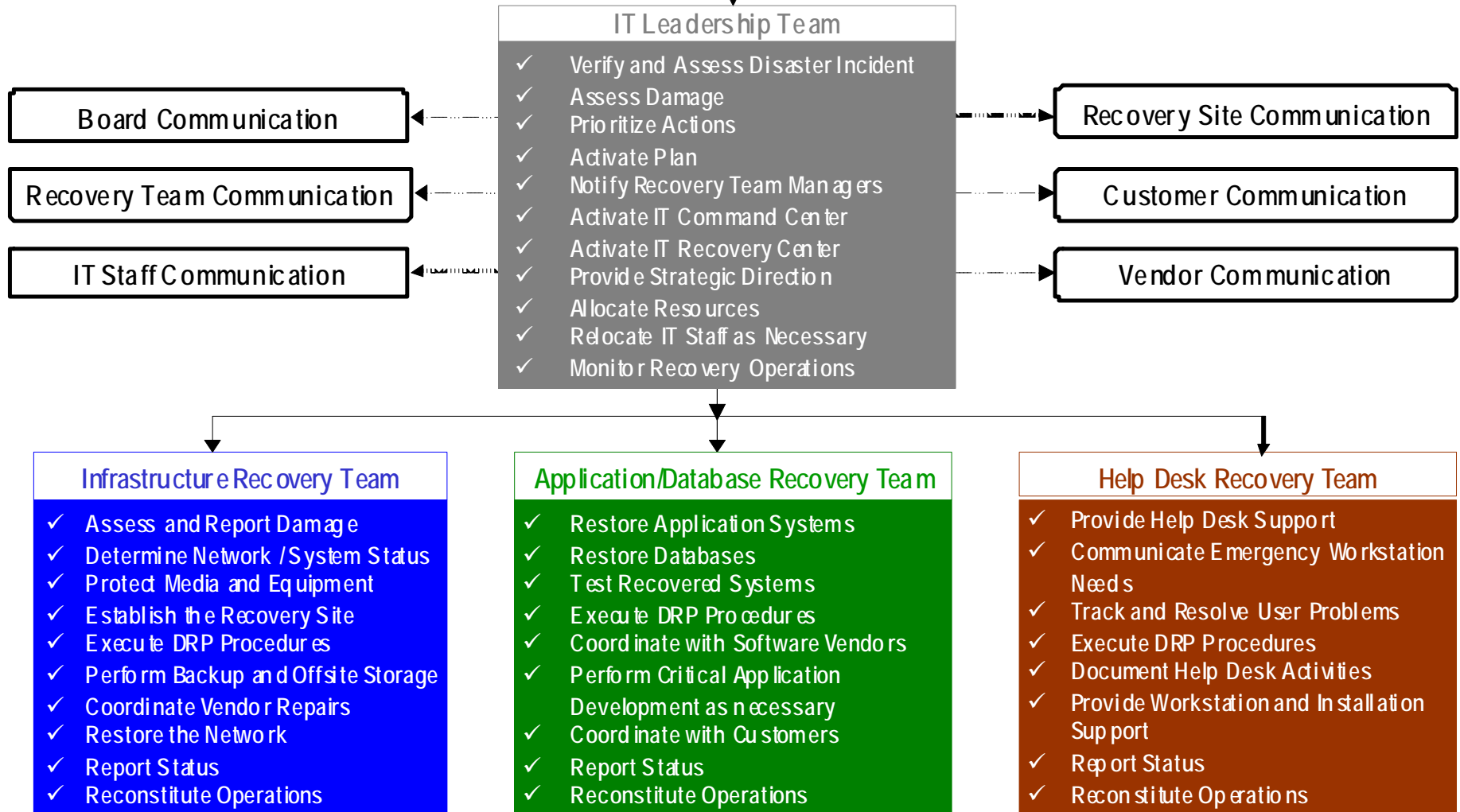
Various combinations of recovery teams are possible depending on the size and requirements of the organization. The number of teams depends on the size and complexity of the organization. The number of members assigned to a specific team can also vary depending on need. Normally a single individual should not be assigned to multiple teams.

We recommend that the IT Business Continuity/Disaster Recovery Plan be structured with five Teams. The Plan should detail the procedures and specific responsibilities for each respective team. The primary team is the IT Leadership Team with complete functional responsibility for all recovery-planning activities. Recovery Teams are operational groups responsible for specific functions. Each team has a separate Plan section, which is written and formatted to use on a stand-alone basis. The team sections include specific responsibilities and procedures to be followed in the event of a disaster, which allows for a rapid and smooth recovery process. The Recovery Teams can be color coded to facilitate the use of the Plan as described below:

Color Name	Team Description	Section
Gray	IT Leadership Team	Five
Blue	Infrastructure Recovery Team	Six
Green	Application / Database Recovery Team	Seven
Brown	Help Desk Recovery Team	Seven

The recommended IT Business Continuity/Disaster Recovery Team Chart is attached.

Rochester-Genesee Regional Transportation Authority IT DRP Recovery Team Structure



6.2.1 IT LEADERSHIP TEAM

The IT Leadership Team has the following general responsibilities:

Management Responsibilities:

- Receiving the initial disaster alert
- Verifying the disaster event
- Assessing the disaster event
- Activating all or part of the IT Business Continuity/Disaster Recovery Plan
- Notifying Recovery Team Managers
- Prioritizing actions and activities
- Executing recovery procedures
- Carrying out the communications plan
- Performing operations action planning
- Activating the IT Command Center:
 - ✓ Facilities
 - ✓ Personnel
 - ✓ Equipment and supplies
- Determining if relocation may be required
- Determining immediate operating needs
- Monitoring operations
- Documenting recovery operations
- Providing strategic direction to all Recovery Teams and personnel

Logistics Responsibilities:

- Coordinating salvage efforts
- Arranging for basic support services
- Obtaining office equipment as necessary
- Arranging transportation, lodging and food
- Verifying personnel status
- Arranging security:
 - ✓ Disaster site
 - ✓ Alternate processing and facility sites
- Arranging for temporary personnel
- Notifying postal and courier services
- Analyzing records retention and salvage requirements
- Coordinating asset removal
- Reconstituting to normal operations

6.2.2 INFRASTRUCTURE RECOVERY TEAM

The **Infrastructure Recovery Team** has the following general responsibilities:

- Determining the status of the systems and data/voice networks
- Protecting media and equipment
- Notifying vendors and coordinating repairs
- Restoring data and voice equipment
- Restoring the voice and data communications circuits
- Restoring server equipment
- Resolving connectivity problems
- Retrieving offsite media
- Establishing the Recovery Site
- Performing processing and operations at the Recovery Site
- Performing Backup and Offsite Storage at the Recovery Site
- Executing recovery procedures
- Reporting status to the IT Leadership Team
- Reconstituting to normal operations

6.2.3 APPLICATION / DATABASE RECOVERY TEAM

The **Application / Database Recovery Team** has the following general responsibilities:

- Working closely with other Recovery Teams to ensure the highest degree of customer service possible
- Assigning team members to the specific responsibilities detailed in the Plan
- Restoring application systems to operational status
- Restoring system databases and files from backup copies of electronic media
- Executing the technical procedures to recover the systems and data
- Testing restored systems
- Coordinating with customers
- Coordinating with application software vendors
- Executing recovery procedures
- Performing application development if critical
- Reporting status to the IT Leadership Team
- Reconstituting to normal operations

6.2.4 HELP DESK RECOVERY TEAM

The **Help Desk Recovery Team** has the following general responsibilities:

- Providing user and helpdesk support
- Communicating emergency workstation procurement needs
- Providing workstation installation and support
- Tracking and resolving user problems
- Documenting Help Desk activities
- Executing recovery procedures
- Reporting status to the IT Leadership Team
- Reconstituting to normal operations

6.3 IT BUSINESS CONTINUITY/DISASTER RECOVERY PLAN FORMAT

We recommend that the Authority 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.

RGRTA	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/DRP is activated. • Column 3 - Documents the person responsible for completing the procedure. • Column 4 - Identifies the date and time the procedure is completed. 		
1			
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6.4 IT BUSINESS CONTINUITY/DISASTER RECOVERY PLAN OUTLINE

A well-designed and organized continuity plan will directly affect the recovery capabilities of the Authority. 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 an IT Business Continuity/Disaster Recovery 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 IT Business Continuity/Disaster Recovery Plan is attached.

RGRTA	CONFIDENTIAL
IT Business Continuity / Disaster Recovery Plan	Table of Contents

Section	Description	Page #
1	Overview	
1.1	Introduction	
1.2	Recovery Strategies Overview	
1.3	Relocation Strategies Overview	
1.4	Plan Organizational Structure	
1.5	Plan Assumptions	
1.6	Plan Activation Process	
1.7	Emergency Procurement	
2	Background	
2.1	Plan Objectives and Scope	
2.2	Benefits	
2.3	BCP/DRP Policy Statement	
2.4	Plan Maintenance and Distribution	
2.5	BCP/DRP Development Methodology	
3	Communications Plan	
3.1	Overview	
3.1.1	Internal Communications	
3.1.2	External Communications	
3.2	Recovery Team Communications	
3.3	Employee Communications	
3.3.1	Overview	
3.3.2	Employee Calling List	
3.3.3	Intranet (Internal Web Site) Announcements	
3.3.4	Internet (External Web Site) Announcements	
3.3.5	Email Announcements	
3.3.6	Voicemail Announcements	
3.3.7	News Media Announcements	
3.3.8	Ad-Hoc Announcements	

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Section	Description	Page #
3.4	Vendor Communications	
3.5	Customer Communications	
3.6	Other Communications	

4	Recovery Team Structure	
4.1	Recovery Team Definitions	
4.2	Recovery Team Roles and Responsibilities	
4.2.1	IT Leadership Team	
4.2.2	Infrastructure Recovery Team	
4.2.3	Application / Database Recovery Team	
4.2.4	Help Desk Recovery Team	
4.3	Disaster Event Guidelines	
4.4	Recovery Team Assignments	
4.5	Reporting to Work Policies	

5	IT Leadership Team	
5.1	Management Activities	
5.1.1	Disaster Verification	
5.1.2	Damage Assessment Coordination	
5.1.3	Plan Activation	
5.1.4	Recovery Team Scheduling	
5.1.5	Recovery Center Activation	
5.1.6	Executive Management Communications	
5.1.7	Legal Considerations	
5.1.8	Monitoring Recovery Activities	
5.2	Logistics Activities	
5.2.1	Employee Well Being	
5.2.2	Notification Procedures	
5.2.3	Postal and Courier Services	
5.2.4	Facility Activities	

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Section	Description	Page #
5.2.5	Salvage Procedures	
5.2.6	Security Activities	
5.2.7	Personnel Procedures	
5.2.8	Vital Records	
5.2.9	Transportation, Lodging and Food	
5.2.10	Emergency Purchasing	
5.3	Administration	
5.4	Reconstitution and Termination	
5.5	Ad Hoc Procedures	

6	Infrastructure Recovery Team	
6.1	Initial Procedures	
6.2	Notification Procedures	
6.3	Recovery Team Scheduling	
6.4	LAN/WAN Recovery	
6.4.1	Data Impact Assessment	
6.4.2	Media and Equipment Protection	
6.4.3	Connectivity Validation	
6.4.4	LAN/WAN Fail-Over	
6.4.5	Equipment Installation & Configuration Procedures	
6.4.6	Communication Provider Notification	
6.4.7	Data Communications Circuits Restoration	
6.5	Systems Recovery	
6.5.1	Systems Impact Assessment	
6.5.2	Media and Equipment Protection	
6.5.3	Emergency Server / Equipment Procurement	
6.5.4	Server Installation & Configuration Procedures	
6.5.5	Verification Procedures	

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Section	Description	Page #
6.6	Voice Recovery	
6.6.1	Voice Impact Assessment	
6.6.2	Media and Equipment Protection	
6.6.3	Connectivity Validation	
6.6.4	V-Mail	
6.6.5	Equipment Installation & Configuration Procedures	
6.6.6	Communication Provider Notification	
6.6.7	Voice Communications Circuits Restoration	
6.7	Security	
6.8	Status Reporting	
6.9	Administration	
6.10	Reconstitution and Termination	
6.11	Ad Hoc Procedures	

7	Applications / Database Recovery Team	
7.1	Initial Procedures	
7.2	Notification Procedures	
7.3	Application Impact Assessment	
7.4	Media and Equipment Protection	
7.5	Recovery Team Scheduling	
7.6	Application Recovery Procedures	
7.7	Application Verification Procedures	
7.8	Database Restoration	
7.9	Database Verification	
7.10	Systems Development	
7.11	Security	
7.12	Status Reporting	
7.13	Administration	
7.14	Reconstitution Procedures	
7.15	Ad Hoc Procedures	

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Section	Description	Page #
8	Help Desk Recovery Team	
8.1	Initial Procedures	
8.2	Notification Procedures	
8.3	Recovery Team Scheduling	
8.4	Media Retrieval Procedures	
8.5	Recovery Site Startup	
8.6	Recovery Site Library	
8.7	Recovery Site Processing and Operations	
8.8	Backup and Offsite Storage	
8.9	Security	
8.10	Status Reporting	
8.11	Administration	
8.12	Reconstitution and Termination	
8.13	Ad Hoc Procedures	

8	Help Desk Recovery Team	
8.1	Initial Procedures	
8.2	Notification Procedures	
8.3	Current System and Application Status	
8.4	Media and Equipment Protection	
8.5	Recovery Team Scheduling	
8.6	User Support / Communication	
8.7	Emergency Workstation Procurement	
8.8	Workstation Installation / Support	
8.9	Security	
8.10	Status Reporting	
8.11	Administration	
8.12	Reconstitution Procedures	
8.13	Ad Hoc Procedures	

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Section	Description	Page #
9	Plan Administration	
9.1	Plan Distribution	
9.2	Plan Maintenance	
9.3	BCP/DRP Maintenance Checklist	
10	Team Member Notification Guidelines	
10.1	Notification Methods	
10.2	Notification Procedures	
11	Team Assignment Forms	
	Exhibit 1: IT Leadership Team Assignment Form	
	Exhibit 2: Infrastructure Recovery Team Assignment Form	
	Exhibit 3: Applications / Database Recovery Team Assignment Form	
	Exhibit 4: Help Desk Recovery Team	
	Exhibit 5: Team/Exhibit Cross Reference	
	Exhibit 6: Unused	
	Exhibit 7: Unused	
13	Notification Forms	
	Exhibit 8: Employee Calling List	
	Exhibit 9: Vendor Calling List	
	Exhibit 10: Emergency Contact List	
	Exhibit 11: Disaster Declaration Authorization Listing	
	Exhibit 12: Unused	
14	Inventory Forms	
	Exhibit 13: Hardware Inventory	
	Exhibit 14: Software Inventory	
	Exhibit 15: Resource Requirements List	
	Exhibit 16: Office Space Configuration	
	Exhibit 17: Off-Site Storage Inventory	
	Exhibit 18: Unused	

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Section	Description	Page #
15	Recovery Forms	
	Exhibit 19: Disaster Assessment Report	
	Exhibit 20: Team Recovery Progress Report	
	Exhibit 21: Command Center Locations	
	Exhibit 22: Command Center Equipment and Supplies	
	Exhibit 23: Alternate Work Sites	
	Exhibit 24: Application and System Recovery Priorities	
	Exhibit 25: Unused	
16	Maintenance Forms	
	Exhibit 26: Plan Control List	
	Exhibit 27: Plan Maintenance Log	
17	Glossary of Terms	

The Recovery Teams are color coded to facilitate the use of this document as described below:

Color Name	Team Description	Section
Gray	IT Leadership Team	Five
Blue	Infrastructure Recovery Team	Six
Green	Application / Database Recovery Team	Seven
Brown	Help Desk Recovery Team	Eight

APPLICATION BIA DATA COLLECTION FORMS

This section of the report contains the Application BIA Data Collection Forms that were completed by the RGRTA Departments participating in the BIA process. The applications each department identified as required to support their business operations and processes are listed below.

1. Call Center

- Business Objects
- Logic Tree
- Symposium
- Trapeze Suite
- Charter
- Microsoft Office
- Tooty

2. Executive

- Adobe Reader 8
- Microsoft – Excel
- Microsoft – Outlook
- Microsoft – Project
- Windows Media Player
- Microsoft – Word
- Citrix
- AS/400
- Microsoft – Power Point
- Microsoft Publisher
- WinZip

3. Finance and Accounting

- RAMCO Financial Suite

4. Human Resources

- Charter
- Highline Payroll/HR System
- RAMCO Financial Suite

5. Legal Affairs

- Adobe Acrobat
- Citrix
- Highline Payroll/HR System
- Microsoft Office
- Nero
- RAMCO Financial Suite
- Charter
- Dragon Speech Dictation System
- Lenel Camera System
- Outlook Add-in
- Pictometry

6. Lift Line & Regionals

- ArcView
- Highline Payroll/HR System
- Microsoft Publisher
- RAMCO Financial Suite
- Trapeze Pass
- Citrix
- Microsoft Office
- Pictometry
- Trapeze Customer Care

7. Maintenance

- AS/400
- Fleetwatch
- Kronos
- Microsoft Outlook
- Microsoft Visio
- Paner
- Crystal Reports
- Highline Payroll/HR System
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Word
- RAMCO Financial Suite

8. Marketing

- Adobe Programs
- Microsoft Office
- Microsoft Outlook

9. RTS Operations

- AS/400
- Highline Payroll/HR System
- Microsoft Office
- Orbital Science (ACS)
- Pictometry
- Charter
- Lenel Camera System
- Nice Racal Mirra
- Petro Vend
- Trapeze OPS

10. Procurement and Grants Administration

- Adobe Acrobat
- Microsoft Outlook
- RAMCO Financial Suite
- Veeder-Root Fuel Management and Leak Detection
- Microsoft Excel
- Microsoft Word
- Trapeze (Ride-Pro Car Pool Matching Software)

11. Scheduling

- AS/400
- APC's
- Luminator/Twin Vision
- Trapeze FX
- ArcView GIS
- Charter
- Orbital (ACS)

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Business Objects	Department Name: Call Center
Application Description: Reporting Package	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	5-6 times a week
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1-2 weeks Reports needed for TOPS and HR issues.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	TOPS report Operations HR
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y System provides information for driver discipline.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Moderate Public Safety/Public Health: Moderate Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Charter	Department Name: Call Center
Application Description: Customer Relationship Software	Participating Department Personnel: Company- wide

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1-2 days All customer contacts are tracked through this system including web and email.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Contacts are referred to other departments for response – HR, Operations, Scheduling, Claims
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Claims not being responsive or having necessary information
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Severe Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Orders for vendors are placed using this system.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Logic Tree	Department Name: Call Center
Application Description: RTS Automated/Lift Line Call Back	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Constant
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	By end of business day Calls would be transferred to Call Center – extremely heavy volume – would need additional personnel to handle volume
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y – manual answer
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Depending on personnel
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y – Radio control after hours
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Severe Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y – overtime costs and additional staff
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Poor customer service

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Office	Department Name: Call Center
Application Description: Office Products	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1-2 days Source of emails, calendars, means of communication with customers and staff
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	N

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Symposium	Department Name: Call Center
Application Description: Call Center Phone Management	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	2-4 hours This software manages the call distribution to agents for the phone system.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	0
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Calls would be received by Radio Control and Front Desk
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Lift Line phones are required to be answered
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Minor Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Lost revenue with customers not able to access information
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Tooty	Department Name: Call Center
Application Description: Secret Shopper	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Quarterly
2. Volume:	20-30 times/quarter
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 month
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	0
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y – reports may be received in timely fashion
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: N/A Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Trapeze Products	Department Name: Call Center
Application Description: Trapeze Products	Participating Department Personnel: Ann Nichols

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1-2 hours All Lift Line rides are scheduled using this software. In addition RTS staff use this product to provide information to the public
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Paper
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	4 hours
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Scheduling, Lift Line dispatch, front desk, Radio Control
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Lift Line customers not being scheduled in a timely fashion.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Y Lost revenue from Lift Line and RTS customers not having information needed.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Adobe Reader 8	Department Name: Executive
Application Description:	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Irregular
2. Volume:	Several times per month
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Year
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Citrix	Department Name: Executive
Application Description: Project Management	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Several times per week
2. Volume:	1 -3
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Unable to connect remotely
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: N/A Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	possible
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Office - Excel	Department Name: Executive
Application Description: Spreadsheet	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	6 - 12
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Unable to generate inter-office and external analysis
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: Moderate Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: IBM AS/400	Department Name: Executive
Application Description: Personnel	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Irregular
2. Volume:	1 -3 times per month
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Month
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Office - Outlook	Department Name: Executive
Application Description: Personal Information Manager	Participating Department: COO

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Constant
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 hour
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Unable to manage calendar, communicate via email, retrieve contacts, manage tasks
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Severe Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	possible
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Power Point	Department Name: Executive
Application Description: Presentation Program	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Monthly
2. Volume:	Once
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Year
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS – Project	Department Name: Executive
Application Description: Project Management	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	1 -3
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Unable to manage major projects
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Publisher	Department Name: Executive
Application Description: Desktop Publishing	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Infrequent
2. Volume:	Infrequent
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Year
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Windows Media Player	Department Name: Executive
Application Description:	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Irregular
2. Volume:	Several times per month
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Year
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: WinZip	Department Name: Executive
Application Description: Compress files-expand files	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Infrequent
2. Volume:	Infrequent
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Year
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Office - Word	Department Name: Executive
Application Description: Word Processor	Participating Department Personnel: COO

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	6 - 12
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 day
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	N
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Unable to generate inter-office and external correspondence
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Moderate Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possible
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: RAMCO Financial Suite	Department Name: Finance
Application Description: GL; AP; FA; AR; Budget; Contract Admin	Participating Department Personnel: RW Frye

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	3500 monthly transactions in Ramco
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	If system is inoperable, ability to process accounting transactions is completely lost. Staff work would be limited to review of hard copy accounting related source documents in preparation for data entry.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Manual processing is not a feasible alternative. We have (10) departments.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Zero
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Purchasing and payment functions would be severely restricted.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Late payment to vendors could result in late fees and/or contractual noncompliance.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Moderate Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	If operations shut down, all operating revenues cease
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	All operations shut down. Severe hardship to community residents and businesses.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Charter	Department Name: Human Resources
Application Description: Customer Services	Participating Department Personnel:

Application Criteria	Criteria Description
1. Cycle:	Daily Review of New HR related Issues
2. Volume:	Daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Could be deferred if processed non electronically Response times to Customers, Response to Customer Complaints, Response to applicants delayed. Decreased Customer Satisfaction ratings.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Interoffice Memorandum – paper based system, paper files of customer history, and follow-up.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinite Slower Cycle time, decreased Customer Sat.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Customer Service Operations Transportation Service Failure to communicate system issues in a timely fashion.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Not likely – although could be contributory to another similar issue being preventable if we were on notice of an issue, which could be raised in litigation
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Severe Public Safety/Public Health: Moderate Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Revenue neutral
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Impacts Customer Service Relationships

APPLICATION BIA DATA COLLECTION FORMS

Application Name: High Line	Department Name: Human Resources
Application Description: Payroll, Time and Attendance	Participating Department Personnel:

Application Criteria	Criteria Description
1. Cycle:	Payroll Daily – Input Daily 24/7
2. Volume:	Payroll uses HL all work days 8+ hours, Garage Supervisors 24/7; Regional Operations
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Cannot be deferred All current payroll processes are contingent on High Line Functioning
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Hand Checks through Finance
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	1 payroll week possibly in dire circumstances with the full cooperation of the Finance department. Failure to Pay Employees, failure to meet obligations of Union Contract, DOL violations, errors in processing, IRS implications W-2's
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes - All Employees pay checks Timelines extended
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes Wage and Hours payments DOL Union Contractual Obligations
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Revenue Neutral
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Relationships with Employees; Perception of new systems are worse than the antiquated systems they replaced.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: RAMCO	Department Name: Human Resources
Application Description: Financial System	Participating Department Personnel:

Application Criteria	Criteria Description
1. Cycle:	2-3 times per month
2. Volume:	1 hour at a time
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 month
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Paper review of accounts payable and receivable.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	N
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Not revenue generating but provides gauge of financial picture
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Budget over runs depending upon the time of year. Close of books affected, reporting to state agencies affected/slowed if reduced to paper files/tracking/reports.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Adobe Acrobat	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Multiple times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely. We would need to get documents by another method but that could be done.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- US Mail
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes -- Loss of efficiency would have a minor economic impact.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Charter	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	1-2 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely -- our customer service would suffer and our ability to monitor the performance of our employees would be negatively impacted
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Call the Call Center to obtain the information. The Call Center could enter the information in a regular Excel spreadsheet
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not Known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Moderate Public Safety/Public Health: Moderate Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes -- Loss of efficiency would have an economic impact
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Citrix	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	3-4 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely -- Only impact the fee that we could not work from a remote location
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Transport necessary documents and materials using a thumb drive
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not Known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes -- Loss of efficiency would have an economic impact
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Dragon Speech Dictation System	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Multiple Times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Keyboard
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	None
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: N/A Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: High Line	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	3-5 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely -- This would make it difficult to monitor workers compensation issues.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Rely on hard copy records
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not Known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes -- Loss of efficiency would have an economic impact
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Lenel Camera System	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Monthly
2. Volume:	10 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely -- Accident investigation would be more difficult.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- The same process was used before we had cameras for investigating accidents.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not Known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes -- The absence of video of accidents would make it more difficult to defend lawsuits and workers compensation claims and would probably result in the Authority paying more in settling and defending legal claims
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Office	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Constantly
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	None. Without Microsoft office functioning, we would basically not be operative, would not have access to information, and would not be able to do our job.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Outlook Add-in	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Multiple times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Use of Microsoft Outlook without the add-in
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	None
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: N/A Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Nero	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	1-2 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not Known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Pictometry	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Monthly
2. Volume:	2 times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinitely
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes -- Other programs provide guide use, such as Google Maps
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	None
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: N/A Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: RAMCO	Department Name: Legal Affairs Department
Application Description:	Participating Department Personnel: Hal Carter, Amy Cote, Julie Tennant, Dave Masten, Karen Jenness

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Multiple Times
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Seven business days
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Not known
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Severe Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Unknown
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: ArcView	Department Name: Lift Line & Regionals
Application Description: Digital Mapping	Participating Department Personnel: Vice President

Application Criteria	Criteria Description
1. Cycle:	Monthly
2. Volume:	Once per month.
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several months. Impact of delay would be low.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No alternative process in place.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	NA
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	None
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	ArcView is used in our department as an occasional analytical tool. Unavailability of ArcView would delay any analyses that may be occurring at the time.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Citrix	Department Name: Lift Line & Regionals
Application Description: Remote Computer Access	Participating Department Personnel: Vice President, Directors

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	Five times per week
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several weeks
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Minimal
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Citrix allows remote computer access. This ability would be unavailable if Citrix were inoperable.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: High Line	Department Name: Lift Line & Regionals
Application Description: HR/Payroll Software	Participating Department Personnel: Multiple

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	Once a week
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several days
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	NA
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Payroll.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Unknown
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Employees would not be paid on time.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Office	Department Name: Lift Line & Regionals
Application Description:	Participating Department Personnel: All Office Staff

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Heavy use
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One day
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	NA
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Finance, HR, Training, Leadership Team. Most department files and computer activities involve Microsoft Office programs. Most administrative functions would be affected.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Unknown
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Moderate Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Unknown.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Most administrative functions would be hindered by the unavailability of Microsoft Office programs (Excel, Access, Word, Outlook).

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Publisher	Department Name: Lift Line & Regionals
Application Description:	Participating Department Personnel: Vice President

Application Criteria	Criteria Description
1. Cycle:	Once every several months
2. Volume:	See above
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinite.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: N/A Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Very minimal impact. Low priority.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Pictometry	Department Name: Lift Line & Regionals
Application Description: High Resolution Aerial Photography Software	Participating Department Personnel: Director of Operations

Application Criteria	Criteria Description
1. Cycle:	Every other week
2. Volume:	Approximately once every other week
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Indefinite
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes. Google maps satellite view.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinite
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Inability to remotely assess the availability of bus access to a particular location.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: RAMCO	Department Name: Lift Line & Regionals
Application Description: Finance, purchasing, & inventory tracking software	Participating Department Personnel: Vice President, Parts Department Clerks

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	All day long in Parts Department
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several days. We would be unable to generate purchase orders and unable to electronically track parts inventory. This could cause a delay in getting parts and supplies, which would affect operations.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None in place.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Finance department. We would be unable to generate purchase orders, which means payment to vendors would be delayed.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Possibly, if payments to vendors were delayed long enough.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Trapeze Customer Care	Department Name: Lift Line & Regionals
Application Description: Trapeze Customer Care	Participating Department Personnel: Director of Operations, Lift Line Schedulers

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	See above
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several weeks
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes. Contacting Trapeze by telephone.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinite
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: N/A Customer Service: Moderate Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Trapeze Pass	Department Name: Lift Line & Regionals
Application Description: Ride Scheduling Software for Lift Line	Participating Department Personnel: Director of Operations, Lift Line Schedulers

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	All day long in Scheduling Department
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	This process cannot be deferred at all! Our ride request satisfaction would drop to unacceptably low levels. We would be unable to provide our core service to our customers.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes, but not at all ideal. Rides requests would have to be manually recorded and scheduled.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None!!! We would not be able to provide adequate service to our customers without this software.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Customer service: Customer complaints would skyrocket. Communications: The potential service impact would likely generate media attention. Labor relations: The emergency nature of responding to this operational challenge could result in driver work rules being violated. Finance: Response to loss of this application would cause much overtime to be incurred.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes. We are under court decree to satisfy 100% of Lift Line ride requests. Losing this business process would severely affect our ability to meet that requirement.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Severe Public Safety/Public Health: Moderate Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	This business process has to be performed. It is out core mission. Not performing it is not an option.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Our service would not operate at all if we did not perform this business process!

APPLICATION BIA DATA COLLECTION FORMS

Application Name: AS/400	Department Name: Maintenance
Application Description: PM's Work Orders	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	3
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	2 days Work flow disruption critical repair information lost; PM's not done
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Finance / Purchasing budget, financial information
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term - none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Moderate Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Crystal Reports	Department Name: Maintenance
Application Description: Daily Ops information	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	1
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Reports
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term - none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Fleetwatch	Department Name: Maintenance
Application Description: Fluids/Fuel	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	1
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Lack of budget monitoring
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Y Finance/Purchasing Budget, financial information, stock replenishment
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Highline	Department Name: Maintenance
Application Description: HR information/time keeping/wage information	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	13
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 day pay/wage info
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes Kronos
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Week Very manual process; time consuming
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Finance/Purchasing/HR
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Kronos	Department Name: Maintenance
Application Description: Time Keeping	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	13
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Alt time information
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes Paper tracking
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	7 Very manual process; time consuming
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Finance/HR budget, financial information,
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Excel	Department Name: Maintenance
Application Description: Daily production information	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Daily production data
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Outlook	Department Name: Maintenance
Application Description: Communication	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	20
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Critical communication problem
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Yes Telephone/meetings
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	7 Minimal
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes All departments. Communication would get difficult
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS PowerPoint	Department Name: Maintenance
Application Description: Presentations; Monthly reports	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Monthly
2. Volume:	3
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Reports
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Visio	Department Name: Maintenance
Application Description:	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Weekly
2. Volume:	1
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Word	Department Name: Maintenance
Application Description: Daily production information	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Continuous
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week Daily information
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Paner	Department Name: Maintenance
Application Description: Part expense	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	1
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week timeliness in monitoring parts expense
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Finance / Purchasing budget, financial information, stock replenishment
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Ramco	Department Name: Maintenance
Application Description: Budget	Participating Department Personnel: Supervisors, Director, Deputy Director, Budget analyst, Admin assistant

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	2
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Week lack of budget monitoring
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Finance / Purchasing budget, financial information, stock replenishment
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Short term none
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None in the short term
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None in the short term

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Adobe Programs	Department Name: Marketing
Application Description:	Participating Department Personnel: Jacqueline Halldow

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	All Day
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Several days
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Have Frontline design marketing/communications needed
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely. Obviously not the preferred method.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: N/A Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Office	Department Name: Marketing
Application Description:	Participating Department Personnel: Jacqueline Halldow

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	All Day
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Immediate. We would need to issue a media release immediately if a disaster occurred.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Cell phone. Individual calls placed to media outlets
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely. Obviously not the preferred method.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Not able to draft notices to employees.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Outlook	Department Name: Marketing
Application Description:	Participating Department Personnel: Jacqueline Halldow

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	All Day
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Immediate. We would need to issue a media release immediately if a disaster occurred.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Cell phone. Individual calls placed to media outlets
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Indefinitely. Obviously not the preferred method.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Not able to draft notices to employees.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: N/A Customer Service: Severe Public Safety/Public Health: Severe Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: IBM AS/400	Department Name: RTS Operations
Application Description: Operations, Attendance; personnel mgmt	Participating Department Personnel: Dispatchers, LaTonya Young

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Too frequent to count—Critical System
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Cannot Defer Process This is basic to assigning work for daily bus service, tracking attendance, quarterly bidding of work per contract.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Paper and pencil AS/400 will be replaced by Trapeze OPS System.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Limited by the amount of time we pre-print schedule forms, etc. In advance. Currently done for one week in advance.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Impact is on core business of providing bus service—assigning operators to work.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Inferior service could affect subsidy agreements with major customers
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Moderate Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Inferior service could affect subsidy agreements with major customers
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Delay in getting buses out on routes. Customers late for work, major business reputation problem – negative media.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Charter	Department Name: RTS Operations
Application Description: Customer Compliant Investigation	Participating Department Personnel: Philpott, Todd, Road Supervisors

Application Criteria	Criteria Description
1. Cycle:	Checked daily to assign follow up to supervisors
2. Volume:	Unknown—frequently
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	This function would be non-essential during a disaster—for RTS Operations. However, I believe it keeps a database of all Lift Line customers?
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Could be temporarily replaced by email, but would not be an effective.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Five days
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Customer Service, CEO's office-- Failure to address, track, respond to customer complaints could affect customer satisfaction.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Failure to receive and act on serious complaints of bus operator safety violations or misconduct could result in potential litigation or complaints to other agencies, media, etc.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Severe Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Moderate—system used to track regular fare media purchases by customers.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Poor customer satisfaction

APPLICATION BIA DATA COLLECTION FORMS

Application Name: High Line	Department Name: RTS Operations
Application Description: Payroll, future other modules	Participating Department Personnel: Dispatchers, G. Todd

Application Criteria	Criteria Description
1. Cycle:	Daily; future interface with Trapeze Ops
2. Volume:	High
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One day—Would have to resort to time consuming manual system—paper/pencil. Potential to lead to labor grievances due to errors in pay, overtime, etc.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Paper/pencil; OR retain current AS/400 as a back-up.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Unk. How alternate payroll system could be performed to enable operators to be paid.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Human Resources—Payroll, Labor Relations
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Grievances filed by labor union; complaints to PERB.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N/A
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Extremely bad for employee morale. On-going problems with High Line pay and other errors are already causing morale problems.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Lenel Camera System	Department Name: RTS Operations
Application Description: CCTV Monitoring Software	Participating Department Personnel: Radio Controllers

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Frequent—continuous monitoring, potential for playback
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Current system would have only minor overall security impact. Greatest impact would be loss of monitoring of fare box and cash transfer to armored car service in Service Bldg. This is a major internal control. Future system will have many more cameras, and access control admin.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None. Possibly would require additional security guard personnel.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Finance; Legal Affairs; workers comp.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Potential for litigation for unsafe workplace; loss of fare revenue.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: Severe Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Impact to internal controls on cash handling.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Facility security vulnerability

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Microsoft Office	Department Name: RTS Operations
Application Description: General Business Usage	Participating Department Personnel: All Operations Staff

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Frequent
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week—there is no alternate for basic word processing, email, spreadsheets, calendar maintenance, etc. Greatest impact would be on written communications.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Same impact on all departments
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Unknown
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: , Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Major loss of efficiency, productivity
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	None

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Nice Racal Mirra	Department Name: RTS Operations
Application Description: Voice Logger for Radio, Phones	Participating Department Personnel: Operations Admin, G. Todd, B. Philpott

Application Criteria	Criteria Description
1. Cycle:	Continuous recording
2. Volume:	Continuous recording—critical system
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Used to defend against grievances related to assigning work; discipline; claims defense; complaint and major incident investigations.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Legal affairs—claims mgmt; workers comp; customer service; hr—labor relations. See #3 above.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Grievances can advance to arbitration; claims to litigation.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: Moderate Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Loss due to adverse decision in claims litigation or grievance arbitration.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Reduce ability to investigate items listed in #3.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Orbital Science (ACS)	Department Name: RTS Operations
Application Description: CAD/AVL	Participating Department Personnel: Radio Controllers, Bus Operators

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	High volume—CRITICAL SYSTEM
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Orbital CAD/AVL—our computer aided dispatch, auto vehicle locator. Used for route & schedule adherence and many other measures. Radio communications to operators
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Fallback mode results in voice only communications
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Impacts data entered into orbital used for key operating measurements, "tops", etc.; communication system with bus operators.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Communications failure with buses needing assistance (on board problem, accident, injury) could result in litigation; injury, loss of life.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Severe Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Severe if on-time performance impacts major subsidy customers.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Negative media exposure; loss of business reputation.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Petro Vend	Department Name: RTS Operations
Application Description: Gasoline pump access control and usage, billing	Participating Department Personnel: Amy Stern, LaTonya Young

Application Criteria	Criteria Description
1. Cycle:	Continuous—24/7
2. Volume:	Continuous—24/7
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	System failure effectively shuts down gasoline pump for use by non-revenue vehicles; and City of Rochester vehicles---police, fire, etc.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None—for protracted failure, would have to fuel off-site.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Finance—reduced revenue from city of Rochester vehicles not using system.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Could violate fueling contract with city of Rochester, but litigation unlikely.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Moderate (CITY AS CUSTOMER) Public Safety/Public Health: Moderate Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Finance—reduced revenue from city of Rochester vehicles not using system.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	City vehicles must fuel on west side of city at Mt. Read Blvd Facility. Affects response time of police, wastes fuel causing east side vehicles to travel to west side of city.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Pictometry	Department Name: RTS Operations
Application Description: Aerial Image, Measurement Software	Participating Department Personnel: B. Philpott

Application Criteria	Criteria Description
1. Cycle:	Infrequent
2. Volume:	Infrequent
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Not critical <i>Note: it appears that this non-licensed software has self-expired recently. Attempts to use, issues message to that effect.</i>
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Google maps—but not as current or able to use measurement tools.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	N/A
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Training, legal affairs, claims
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: N/A Public Safety/Public Health: Minor Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	None
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	May affect ability to investigate some accidents, incidents, route planning, and safety considerations.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Trapeze OPS	Department Name: RTS Operations
Application Description: Transit Operations Management	Participating Department Personnel: Dispatchers, Operations Personnel

Application Criteria	Criteria Description
1. Cycle:	Will be daily—critical system
2. Volume:	Will be daily---critical system
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Cannot defer process—this is basic to assigning work for daily bus service, tracking attendance; quarterly bidding of work per contract.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Paper and pencil. AS/400 will be replaced by Trapeze ops system.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Limited by the amount of time we pre-print schedule forms, etc. In advance. Currently done for one week in advance.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Impact is on core business of providing bus service—assigning operators to work.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Inferior service could affect subsidy agreements with major customers
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: Moderate Statutory/Regulatory: Moderate
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Inferior service could affect subsidy agreements with major customers
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Delay in getting buses out on routes. Customers late for work, major business reputation problem—negative media.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Adobe Acrobat	Department Name: Procurement
Application Description: Document Conversion to PDF Format	Participating Department Personnel: Five (5)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	20 times daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week Loss of this software would require PGA to send and receive documents using fax or overnight carriers.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Fax, USPS, and overnight carriers.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	One week Loss of this software would make it difficult to carry on routine business functions.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes PGA provides services to many departments in the Authority. PGA's inability to carry on business in a timely manner has ripple affects throughout the Authority.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Excel	Department Name: Procurement
Application Description: Spreadsheet	Participating Department Personnel: Seven (7)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	10-12 times daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	1 week Spreadsheets are used to track procurement and grant activity. Loss of spreadsheets would delay processing of grants and procurements.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Re-create spreadsheets from hard copies when available.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Seven Loss of this software would reduce productivity and generally slow down department activities.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes PGA provides services to many departments in the Authority. Reduced productivity will slow PGA's ability to purchase goods and services in a timely manner
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes Loss of productivity
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Outlook	Department Name: Procurement
Application Description: Email processing	Participating Department Personnel: Seven (7)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	100s of times daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week E-Mail communication is a core requirement. Loss of this software would critically impact ability to carry on business.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Phone, fax, USPS, overnight carriers.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	One week Loss of this software would make it extremely difficult to carry on routine business functions.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes PGA provides services to many departments in the Authority. PGA's inability to purchase goods and services in a timely manner has ripple affects throughout the Authority.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: Minor Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes Inability to carry on routine business practices in a timely manner.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: MS Word	Department Name: Procurement
Application Description: Word processing	Participating Department Personnel: Seven (7)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	20-30 times daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	0 days Word processing is a core requirement. Loss of this software would critically impact the ability to carry on business.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Obtain hard copies of documents where available.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	1 day Loss of this software would make it impossible to carry on routine business functions.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes PGA provides services to many departments in the Authority. PGA's inability to purchase goods and services in a timely manner has ripple affects throughout the Authority.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes Inability to carry on routine business practices.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: RAMCO	Department Name: Procurement
Application Description: Financial Software	Participating Department Personnel: Four (4)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Approx. 100 transactions daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One day. Loss of this software would critically impact ability to carry on business.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Manual record keeping and use of available hard copy documents.
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	One day Loss of this software would make it impossible to carry on routine business functions.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes PGA provides services to many departments in the Authority. PGA's inability to process purchase orders and receive delivered goods in a timely manner has ripple affects throughout the Authority.
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Moderate Customer Service: Minor Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes Inability to carry on routine business practices in a timely manner.
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Trapeze (Ride-Pro Car Pool Matching Software)	Department Name: Procurement
Application Description: Used to match trip origins and destinations for the creation of car pools.	Participating Department Personnel: One (1)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	12 times daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week Loss of this software would eliminate PGA's ability to perform matches.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	No
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Inability to provide matching services.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: N/A Customer Service: Moderate Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Veeder-Root Fuel Management and Leak Detection System	Department Name: Procurement
Application Description: Monitors Fluid Levels in RTS' Underground Tanks	Participating Department Personnel: One (1)

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	1 time daily
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One week Loss of this software would require PGA to manually measure the volume of fluids in the tanks.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	Y Manual measurement. ("Sticking" the tanks.)
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	One week Manual measurements are time consuming. We would also lose the leak-detection capability..
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Yes RGRTA uses automatic leak detection to satisfy NYSDEC requirements for underground tanks. However, there are other alternatives to automatic leak monitoring.
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Moderate Financial/Economic: Minor Customer Service: N/A Public Safety/Public Health: Minor Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	

APPLICATION BIA DATA COLLECTION FORMS

Application Name: AS/400	Department Name: Scheduling
Application Description: Daily Pull out sheets and driver information as needed	Participating Department Personnel: All

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Once a day, sometimes more
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	Depends on if there will be any services changes on the day the system is not available Impact- Buses would not go out on road
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	Depends etc.
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Operations Bus don't go out
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	No revenue collected on cut buses
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	We look up several driver related items quite often such as who drove what bus, the seniority list, etc.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: ArcView GIS	Department Name: Scheduling
Application Description: Fixed Route Scheduling Software	Participating Department Personnel: All

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Constantly
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	None. Several members of scheduling would not be able to work that day
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	NA
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Trip Planner and Info Agent in Customer Service Ops in dispatch Plan in scheduling
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	N/A
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Many functions throughout administration would be affected

APPLICATION BIA DATA COLLECTION FORMS

Application Name: APCs	Department Name: Scheduling
Application Description: Automated passenger counters	Participating Department Personnel: Dorsey, Boasi, Switzer

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Several times per day
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	One day
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	One day
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	No
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: N/A Public Safety/Public Health: N/A Statutory/Regulatory: Severe
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	The APC data collected daily is used to generate primarily monthly reports for the leadership team and board of commissioners. Also, the daily section 15 data is used for annual reporting to the FTA. We can fudge FTA data if need be but it is not ideal.

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Charter	Department Name: Scheduling
Application Description:	Participating Department Personnel: All

Application Criteria	Criteria Description
1. Cycle:	As needed
2. Volume:	Once a month or so
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	A month No impact
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Customer Service
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Minor Financial/Economic: N/A Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Complaints go thru this system

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Luminator / Twin Vision	Department Name: Scheduling
Application Description: Destination Sign Software	Participating Department Personnel: Boasi, Wiesner, Melville

Application Criteria	Criteria Description
1. Cycle:	Quarterly
2. Volume:	A week each quarter
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	None at pick time Lost ability to change signs
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Operations, Customer Service Wrong sign would not be good for customers, they would not know what bus to catch
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: N/A Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	Lost revenue from loss of fares
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	People wouldn't know where the bus was going

APPLICATION BIA DATA COLLECTION FORMS

Application Name: Orbital (ACS)	Department Name: Scheduling
Application Description: Route and Schedule Adherence	Participating Department Personnel: Boasi, Wiesner, Switzer, Melville

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Depends on what happens on a given day.
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	None On-Time performance data lost affecting reports, etc.
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	None
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes Executive staff, Leadership Team reports in error
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Moderate Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: N/A
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	I

APPLICATION BIA DATA COLLECTION FORMS

Application Name: TrapezeFX	Department Name: Scheduling
Application Description: Fixed Route Scheduling Software	Participating Department Personnel: All

Application Criteria	Criteria Description
1. Cycle:	Daily
2. Volume:	Constantly
3. The maximum time that the business processes can be deferred if a disaster occurred and rendered the system inoperable: Describe the Impact/Consequences:	None. Several members of scheduling would not be able to work that day
4. Alternate Processing Method (Y/N): Describe the Alternate Processing Method:	None
5. The potential number of days that the alternate process could be performed: Describe the Impact/Consequences:	NA
6. Impact on other Departments (Y/N): Department Names: Describe the Impact/Consequences:	Yes. Trip Planner and Info Agent in Customer Service Ops in dispatch Plan in scheduling
7. Potential Litigation as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
8. Impact of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Department Operations: Severe Financial/Economic: Severe Customer Service: Severe Public Safety/Public Health: N/A Statutory/Regulatory: Minor
9. Revenue Impact as a result of not performing the business processes related to the critical application (Y/N): Describe the Impact/Consequences:	NA
10. Other Impacts as a result of not performing the business processes related to the critical application: Describe the Impact/Consequences:	Many functions throughout administration would be affected

EXHIBITS

8

Exhibit A: Server Recovery Form

Exhibit B: Colocation Service Provider Infrastructure Checklist

Exhibit A Server Recovery Form

Server Name:	
IT System Contact:	
Server Type:	

Operating System:	
Name: _____	Patches Applied: _____
Version: _____	_____

Hardware:	
CPU: _____	Disk: _____
Processor: _____	Capacity: _____
Memory: _____	Other: _____

#	Reconstruction Procedures	Responsible Party	Date/Time
	<i>Base Operating System Installation</i>		
1			
2			
3			
4			
5			
	<i>Operating System Patches/Service Packs</i>		
1			
2			
3			
4			
5			

Exhibit A Server Recovery Form

#	Reconstruction Procedures	Responsible Party	Date/ Time
	<i>Operating System Configuration Settings</i>		
1			
2			
3			
4			
5			
	<i>Special Host Services and Support/Monitoring Applications:</i>		
1			
2			
3			
4			
5			
	<i>Backup Application</i>		
1			
2			
3			
4			
5			
	<i>User Applications</i>		
1			
2			
3			
4			
5			

Exhibit A Server Recovery Form

#	Reconstruction Procedures	Responsible Party	Date/Time
	<i>Database Application (DBMS)</i>		
1			
2			
3			
4			
5			
	<i>Verification Procedures</i>		
1			
2			
3			
4			
5			

Approval	
Prepared By: _____	Date: _____
Review By: _____	Date: _____

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
1. Facility and Physical Requirements					
1.1	Do multiple physically separate connections to public power grid substations exist?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2	Does the data center have a continuous power supply with a backup uninterruptible power supply (UPS) systems:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2a	▪ Is there adequate UPS capacity including air conditioning and lights?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2b	▪ Is the UPS systems tested at full load on monthly schedule?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2c	▪ Does the fuel supply provide for the UPS generators to operate for at least 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2d	▪ Is the fuel supply for the UPS generators kept on premises and monitored for local environmental compliance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3	Does the data center conform to or exceed applicable local structural building codes utilizing standards such as bullet proof glass, fire doors and reinforced walls and complying with disaster proof design:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3a	▪ Does the facility comply with all local zoning ordinances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3b	▪ Is the facility certified as not being located in a 100-year flood plain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3c	▪ Is the data center equipped with earthquake and hurricane bracing on all racks and cable trays (where appropriate)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.4	Does the facility provide for adequate multizone air conditioning, including a backup systems for the multizone air conditioning:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.4a	▪ Are the computer rooms equipped with climate control including humidity sensors and control?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
1.5	Is the data center equipped with heat and smoke detectors that meet or exceed all local fire code regulations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5a	<ul style="list-style-type: none"> ▪ Is the data center using Very Early Smoke Detection Alarm (VESDA) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5b	<ul style="list-style-type: none"> ▪ Is the data center and NOC equipped with an FM200 [ETG5] fire suppression system (or similar)? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5c	<ul style="list-style-type: none"> ▪ Do separate detection/FM200 zones exist under the raised floors? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5d	<ul style="list-style-type: none"> ▪ Is the data center and NOC equipped with a pre-action dry pipe system zoned to release water only where needed? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.6	Is the data center equipped with easily removable access panels in raised flooring?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.7	Do flood sensors and monitoring sensors exist under raised floors and in other critical areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.8	Do separate grounding systems exist to prevent grounding loops (note that this would be true ground versus green wire ground)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.9	Do sealed cable vault entrances exist to the facility and are they remotely monitored?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.10	Does the organization maintain a formalized physical facility preventive maintenance program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.11	Do sub-breakers exist on a: per relay, per rack or per lineup basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.12	Does the service maintain 48 VDC power converters, 220 VAC, 20A, 30A, 40A?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.13	Is a power filtering in UPS system installed and operational?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
1.14	Is there steel construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.15	Is there concrete construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.16	Is there security or police patrolled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.17	Are telephone lines underground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.18	Are electrical lines underground?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.19	Is there restricted access to each floor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.20	Are the windows wired to the security system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.21	Is there a secure loading dock?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.22	Is there a mantrap area at entrance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.23	Is there a fireproof vault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Physical Security					
2.1	Does the organization maintain written security policies and are they readily accessible?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.1a	<ul style="list-style-type: none"> ▪ Do the policies prohibit badge sharing and piggy back entry rules? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.1b	<ul style="list-style-type: none"> ▪ Do the policies require that all visitors must be admitted through reception? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.1c	<ul style="list-style-type: none"> ▪ Do the policies require that a written statement of work exist upon sign-in? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2	Are building access procedures formalized in writing and being followed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2a	<ul style="list-style-type: none"> ▪ Do a limited number of building entrances exist (note that this would require compliance with local fire ordinances)? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2b	<ul style="list-style-type: none"> ▪ Is facility access limited and managed based upon security policies for all facility entrances? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
2.2c	▪ Is the facility patrolled 24x7 by onsite security guards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2d	▪ Is there a visitor-logging procedure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2e	▪ Does the facility use card-key, biometric, or similar entry locks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2f	▪ Is there an ID-badge system for all employees and visitors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2g	▪ Is there a requirement that staff and visitors must wear badges at all times on premises?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.2h	▪ Are facilities outfitted with individual cabinet locks; master in NOC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3	Do critical equipment locations provide for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3a	▪ Video surveillance and motion sensors for entrances, interior doors, equipment cages, and critical equipment locations within the building?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3b	▪ Locked cages with ceilings; locking cabinets with climate control for those wanting more privacy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3c	▪ Secure rooms?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3d	▪ Managed firewall services with 24x7 monitoring available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3e	▪ Backup lighting systems for entry ways and cable vaults?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.3f	▪ Individual cabinet locks; master in NOC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Network Security					
3.1	Are written network access security policies in place, up-to-date and readily accessible? Do Are written network access security policies:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.1a	▪ Password policies (such as not sharing, lengths, forced renewal, aging)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
3.1b	▪ Acceptable use (ISP not allowed to run programs that are illicit or illegal; use of sniffers or cracking/hacking programs are not required)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.1c	▪ Documented user responsibilities on security in company policies and re-enforced by education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.1d	▪ Asset protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2	Is a developed documented network security infrastructure in place, up-to-date and readily accessible by appropriate individuals? Does the network security infrastructure include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2a	▪ Perimeter protection (firewalls, filtering router)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2b	▪ Intrusion detection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2c	▪ Authentication and authorization (passwords, RADIUS/TACACS, Secure IDs)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2d	▪ Backup and recovery systems to restore after a problem, such as load balancing, failover protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2e	▪ Regular assessment of network infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2f	▪ Assessment of network expansions or additions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2g	▪ Tape or media storage offsite backup?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2h	▪ Regularly scheduled security audits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2i	▪ Server antivirus software protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Operations					
4.1	Does the organization have a formalized, up-to-date and maintained database of all installed equipment and configurations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
4.2	Does the organization have a formalized, up-to-date and maintained database of toll and toll-free telephone support?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3	Is data center supported monitoring performed:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3a	<ul style="list-style-type: none"> ▪ 24x7 monitoring of dedicated servers and network equipment (note both frequency and method, such as PING, Simple Network Management Protocol [SNMP])? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3b	<ul style="list-style-type: none"> ▪ 24x7 monitoring of the health of the equipment with alarms and pager alerts for network failure and failovers? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3c	<ul style="list-style-type: none"> ▪ 24x7 monitoring firewall services available? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.4	Is an alternate NOC available if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.5	Are second-tier support personnel located nearby?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6	Does a formalized trouble ticket processes exist? Does the formalized trouble ticket process include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6a	Automated case escalation procedures in place including escalation timeframes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6b	Reporting that provides trending statistics on trouble tickets and minutes (above) to facilitate quality and customer reports?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6c	Performance reporting and end-user impact monitoring?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6d	Periodic and exception reports provided to customers (including usage and problem reports)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.7	Does spare equipment exist on site for key networking equipment in case of hardware failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.8	Does a formalized up-to-date and tested business continuity plan exist? Does the business continuity plan contain requirements for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.8a	<ul style="list-style-type: none"> ▪ Daily site backups 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Exhibit B
Colocation Service Provider Infrastructure Checklist

Number	Question	Yes	No	N/A	Comments
4.8b	<ul style="list-style-type: none"> ▪ Tape vaults or other secure storage facilities on site in case of natural disaster 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.8c	<ul style="list-style-type: none"> ▪ Onsite and offsite storage available 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Backbone Connectivity					
5.1	Do multiple direct connections to Tier 1 Internet carriers using high speed routers as gateways exist?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.2	Does the facility use Border Gateway Protocol vs. 4 BGP-4 routing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.3	Does the organization have Class C Internet address blocks available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.4	Does each carrier has a secure termination area, and location supported via the NOC or is the carrier providing the termination?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.5	Does the fiber enter the data center through diverse conduits or routes (for example, if a backhoe cuts though conduit, the network reroutes to minimize loss of service)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.6	Is the data center aggregate bandwidth sufficient to scale the network to meet the organization's service demands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.7	For non-owned real estate are roof rights and riser conduit right of way rights available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.8	Are multiple riser conduits from cable vault to data center available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Gateway/WAN Edge Layer					
6.1	Is the gateway/WAN edge made-up of High-end routers in a redundant configuration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.2	Is Hot Standby Router Protocol (HSRP) implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
6.3	Is BGP-4 implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.4	Has adequate total packet-per-second capacity for peak load been evaluated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.5	Are appropriate firewalls in place and fully service packed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.6	Is a network security team available 24/7 and in-place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.7	Are firewalls capable of remote management?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Core Layer					
7.1	Is the network core made-up of High-end routers in a redundant configuration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.2	Is switching and linking entirely redundant with no single points or paths of failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.3	Has web cache redirection been implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.4	Has Transmission Control Protocol (TCP) offloading been implemented via reverse proxy caching?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.5	Has HSRP been implemented for fail-over protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.6	Has Intrusion detection been implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.7	Has automatic notification of intrusion attempts been implemented and put-in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Distribution Layer					
8.1	Have high to mid-range switches been deployed at the distribution layer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.2	Is switching and linking entirely redundant with no single points or paths of failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.3	Has web cache redirection been implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.4	Has server load balance been implemented?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
8.5	Has server content routing been implemented if multiple data centers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Access Layer					
9.1	Is the access layer making use of mid range switches?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9.2	Are all servers dual homed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Cabling					
10.1	Are all cable runs located under raised flooring and appropriately marked?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.2	Are all cable runs physically protected from damage via tie-downs or where appropriate in conduit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.3	Are all cabling designed to Category 6 specifications (to support 1-Gbps data rates)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.4	Are communications cabling raceways separate from electrical with no intersections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.5	Is shielded cabling for T1/T3s. DSX panels for XCONN, demarcation, and test points in use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.6	Are all cabling on raceways tied down?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. TV Camera Surveillance					
11.1	Does a video monitoring exist in the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.2	Does the camera coverage include the entire data center, and cages?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.3	Does the camera coverage include an archival system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11.4	Is the camera system integrated with access controls and the alarm system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
11.5	Is the data center lighting integrated with a motion-detection system along with the video camera coverage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Climate Control					
12.1	Do redundant and precision HVAC Systems exist in the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.2	Is the level of redundancy N+1?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.3	Is the redundancy set to failover automatically in the event of a failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.4	Is the facility cooling a "closed system"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12.5	Do environmental monitoring stations exist in the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Security					
13.1	Does 24x7x365 onsite security exists on the data center property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13.2	Do silent alarm and automatic notification of appropriate law enforcement officials exist on all exterior entrances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13.3	Does security inspect and inventory all equipment and personal items upon arrival before entry into data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13.4	Are all exterior walls bullet resistant with Kevlar Wrapping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Fire Detection and Suppression					
14.1	Do Very Early Smoke Detection Apparatus (VESDA) systems exist in the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14.2	Does the data center use gas fire suppression (i.e. Halon 1211, 1301, or 2402; FM-200 or FE-227)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14.3	Does the data center use a dual-interlock pre-action sprinkler system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
14.4	Does the data center use a combination of gas and water fire suppression (for computer rooms versus office areas)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14.5	For dual-interlock pre-action sprinkler system, as one of the actions do sensory mechanisms sample air and provide alarms prior to water pressurization of the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14.6	For dual-interlock pre-action sprinkler system, are heat and smoke used as the activation necessary for water pressurization of the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14.7	For dual-interlock pre-action sprinkler system, is water discharge sprinkler-head specific, limiting the potential for damage caused by over-spray?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Communication Infrastructure					
15.1	Has the facility network been designed with using a network diversity plan with a "self healing" or failover design?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.2	Does the data center communication core make use of redundant high performance routing switches?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.3	Is the data center communication core designed using redundant switches with automatic failover?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.4	Is the data center connected to multiple level 1 premium backbone internet providers using Border Gateway Protocol (BGP) from multiple diverse routes? Number of level 1 access providers used ____.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.5	Is a network security infrastructure using Integrated Services Routers in a redundant configuration used on each network segment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.6	Is the private network behind up-to-date and maintained stateful inspection firewalls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
15.7	Does the data center Intrusion Detection System provide as an in-line deep-packet, inspection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.8	Does the data center make use of an Intrusion Prevention System that can drop traffic, send an alarm, or reset the connection, enabling the router to respond immediately to security threats?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15.9	Does the switching equipment in the data center allow for the configuration of VLANs to increase the security of the users and servers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Biometric Security					
16.1	Are hand geometry readers in use by the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16.2	Are finger print scanners in use by the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16.3	Are retina scanners in use by the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16.4	Are man traps used to enter and exit the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16.5	Are man traps used to enter and exit the sensitive areas within the data center?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Racking					
17.1	Does the data center use enterprise-class rack systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.2	Do data center rack systems provide next-generation structural integrity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.3	Do data center rack systems provide rack cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.4	Do data center rack systems provide cable management?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.5	Are data center rack systems on location specific seismic stabilizers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
17.6	Do data center cabinets provide at least two primary 20 Amp 208V circuits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17.7	Do data center rack systems provide rack security such as locking doors, combination locks, biometric locks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Building Structure					
18.1	Is the building shell location-dependent and seismic compliant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.2	Is the building exterior fully anonymous with no signage indicating its purpose?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.3	Are the building exterior walls tightly sealed with no or a limited number of windows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.4	Are the building floors no post tension or pre-stressed slabs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.5	Are all data center exterior walls are bullet resistant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.6	Is the data center perimeter bounded by concrete bollards/planters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.7	Are the building shipping and receiving areas walled off from sensitive production areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.8	Is the data center built above sea-level with: <ul style="list-style-type: none"> ▪ No basement, ▪ Tightly sealed conduits, ▪ Moisture barriers on exterior walls, and ▪ Dedicated pump rooms? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18.9	Does the building provide drainage/evacuation systems and moisture detection sensors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19. Electrical Infrastructure and Backup					
19.1	Does the data center provide AC raceways with 2N distribution?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Number	Question	Yes	No	N/A	Comments
19.2	Does the data center provide AC power delivery via distributed redundant UPS systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.3	Does the data center provide batteries with at least 7 minutes full load operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.4	Does the data center provide diesel engine generators take roughly less then 8 seconds to synchronize and assume the load?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.5	Does the data center generator fuel tank provide for at least 48 hours worth of generator fuel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.6	Does the data center electrical infrastructure provide isolation K factor transformers used for 480 volt UPS to 208/120 volt. K factor of K20; 80 degrees Centigrade rise; copper winding, dc system fuse protection; -48 volt delivery via fuse panels; Power filtering in UPS systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.7	Does the data center provide redundant AC power connections to server equipment fed from diverse sources?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.8	Does the building have access to multiple power grids for redundant power?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19.9	Does the building have access to multiple water supplies for redundant water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	