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GNFO: Ask Yourself Handbook

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INTRODUCTION

This document replaces document number 010-515-170 which was previously housed in the On-line Documentation Management System (ODMS)

Every effort was made to ensure that the information in this document was complete and accurate at the time of release. However, information is subject to change.

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The Network Operations "Ask Yourself" Handbook is maintained by the Global Network Events/ Change Management group.

Please send your questions, comments, or suggestions to:

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Or email: apeacock@att.com

1. Service Protection

1.1. Introduction

This section of the handbook will introduce you to the *"Ask Yourself"* philosophy and provide you with the information needed to successfully implement it. The *"Ask Yourself"* program was designed to help achieve AT&T's goals of providing flawless network service and of retaining loyal customers. It is a philosophy that requires every person performing work in the network to assess the potential impact of their work in network operations and customer service before beginning a task. Through the *"Ask Yourself"* program we can help:

• Prevent problems before they occur

• Do the right thing at the right time, instead of just doing anything to get the job done

• Question the way things are done and suggest improvements

The goal of providing flawless network service can only be reached if each of us takes personal responsibility for our jobs and works to resolve uncertainties or problems. This section of the handbook will explain how you can do your part to support AT&T's vision for flawless network service.

1.2. "Ask Yourself" Principles and Philosophy

"Ask Yourself" principles are presented in the form of questions. Listed in the table below are the ten *"Ask Yourself"* questions that you should be able to confidently answer "yes" to before you undertake any task related to the network. If you are unable to answer "yes" to any of the eight questions, please stop and resolve the issues before resuming your work. Protecting the network is everyone's responsibility.

THE EIGHT *"ASK YOURSELF"* **PRINCIPLES:**

1. Do I have the proper ID and appropriate building access permissions for the environment I am about to enter?

2. Do I know why I'm doing this work?

3. Have I identified and notified everybody - customers and internal groups - who will be directly affected by this work?

4. Can I prevent or control service interruption?

5. Is this the right time to do this work?

6. Am I trained and qualified to do this work?

7. Are the work orders, MOPs, and supporting documentation current and error-free?

8. Do I have everything I need to quickly and safely restore service if something goes wrong?

9. Have I walked through the procedure?

10. Have I made sure the procedure includes proper closure including obtaining clearance and release for the appropriate work center?

1.2.1. What to do if you can not answer "Yes" to any of the questions

For any question that you cannot answer yes to, you should first contact a peer or your immediate supervisor. If he or she is unavailable or does not know the answer, your next step should be to identify the appropriate technology center (see Sections 1.3.1, 1.5.1 & 1.6.1) and then to call that center for assistance. If these channels fail to provide you with the answers needed, or if you are facing an emergency situation, you should ask the appropriate technology center to put you in contact with the Tier 3 Support immediately.

Chapters 2, 3, and 4 of this handbook provide supporting information for *"Ask Yourself"* questions 4, 6, and 8. Section 2, "Service Method of Procedure", can help you think about procedural issues raised in questions 6 and 8. Section 3, "Work

Schedule Guidelines", and Section 4, "Network Events Guidelines", can help you determine the right time to do work as highlighted by question 4.

The *"Ask Yourself"* methodology is outlined below:
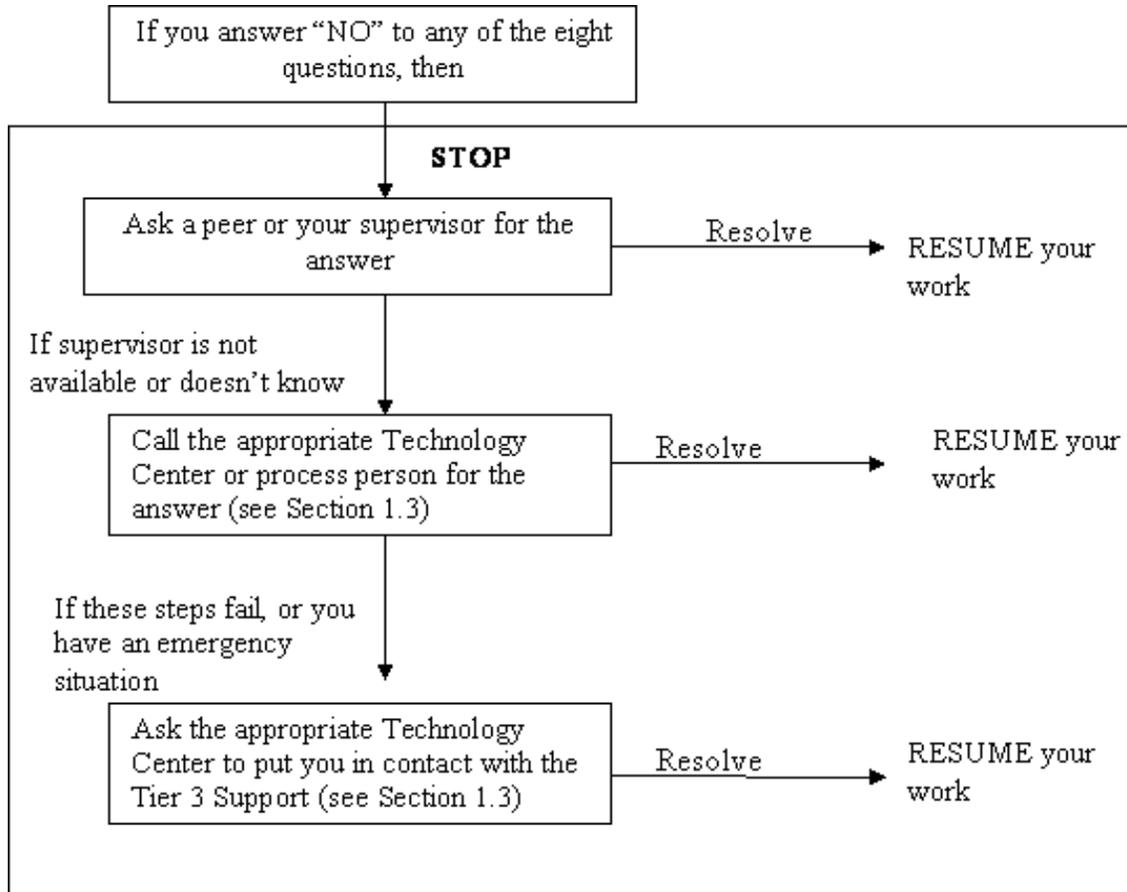
1.3. Index of Technologies, Technology Centers and Phone Numbers

Consult Section 1.3.1 to determine which technology center to call if you have trouble answering any of the ten "Ask Yourself" questions. Find the technology that you are working on in the middle column of the table; the right column for that entry indicates the number to call for questions on that technology.

1.3.1. Work Center Contact Information

Work Center	Location	List of Technologies/ Functions	Contact Number	Provisioning or Maintenance
BMC	231 N Martingale Schaumberg, IL	SNA, CSN, I 1.1, Fast-path, French MPLS	1-877-853-2777 Prompt 2, then Prompt 5	Maintenance
CNMC	2315 Salem Conyers, GA	Outside Plant	800-622-7378 prompt 2 or 770-929-4870	Maintenance
Frame Relay/ATM DNCC	1 ATT Way Bedminster, NJ	FR/ATM, IPFR. AGN Layer 2	908-234-8572	Maintenance
GSMC	2315 Salem Conyers, GA	Domestic & Int'l DS0 DS1 trunk Maintenance	770 785-3491	Maintenance
IP NCC	12976 Hollenberg Dr. Bridgeton, MO	IP CBB, PNT, AGN Layer 3, GO2, IP Cable Network, DSL	1 866 397 7309 Prompt 1	Maintenance
IP Server Group	12976 Hollenberg Dr. Bridgeton, MO	ISP Services - Comcast, Worldnet, Mediacom, Insight, CUR/WUR, Internet Protect, MIS News, MIS DNS, SAS-VP, EVoIP	1-866-397-7309 Prompt 2	Maintenance
LCM Adjuncts	28W615 Ferry Rd. Warrenville, IL	TCS, ER800, VRCP,	630-393-5570	Maintenance
LCM CCS	8372 E Broad St Reynoldsburg, OH	CSPU, GTR, 2STP, 2NCP, SE, USM	614-575-6700	Maintenance
LCM NFSG	28W615 Ferry Rd. Warrenville, IL	Network Services - IntraCity, Metro, VoIP All Elements	630-393-5530	Maintenance
LCM Software Management	28W615 Ferry Rd. Warrenville, IL	4ESS, 5ESS, DMS, CCE	630-393-5450	Maintenance
Legacy Network Operations Centre	Langstone Technology Park Langstone Road Havant Hampshire PO9 1SA United Kingdom.	Frame Relay (GFN, AFN) SNA Layer 3 (MDNS, GMN, MPN, GMS)	+44 2392 475555 Prompt 2 Prompt 3 Prompt 4	Maintenance
LSAC	2315 Salem Conyers, GA	Outside Plant, Customer Access	800-622-7378 prompt 4	Maintenance

Work Center	Location	List of Technologies/ Functions	Contact Number	Provisioning or Maintenance
NTAG / NTRT	2535 E 40th St Denver, CO	4ESS, 5ESS, and DMS Routing and Translations	800-215-0776 prompt 2, 2	Provisioning
Power/Infrastructure	2315 Salem Conyers, GA	Power, Infrastructure, Telemetry	888-590-5860 prompt 6	Maintenance
SSC	12976 Hollenberg Dr. Bridgeton, MO	Mediacom, Comcast, Insight Services	314-298-2004 866-397-7308	Maintenance
Switch & Signal (Voice CoE - Class 4)	2315 Salem Conyers, GA	4ESS, STP, NCP, VRCP, SD, UMS, Adjuncts, ISCP, AIN	4E - 770 602-2437	Maintenance
Transport Electrical	2315 Salem Conyers, GA	T3, DACS I, DACS II, CEF, Digital Radio, ALCATEL, FASTAR	888-590-5860	Maintenance
Transport Optical	2315 Salem Conyers, GA	SONET, Lightguide	888-590-5860	Maintenance
Transport Optical-ONM	2315 Salem Conyers, GA	CNI	770-785-5719	Provisioning./Maintenance - ITA/
Trunk Operations Center (TOC)	One AT&T Way Bedminster, NJ	TDM T1 Facilities and Trunk Groups	877-771-7263 Wk end & hol 732-208-0067	Maintenance
Undersea Cable	One AT&T Way Bedminster, NJ	Lightguide Terminal Equipment (LTE); Power Feed Equipment (PFE); Network Protection Equipment (NPE); Ocean Ground Beds (OGB); Undersea Cable Repair; Land Section Repair: Undersea Cable Protection	Duty Manager Pager: 1-866-206-6568 (w/in US) International dialing: +1-601-960-9547 or +1-601-960-9548; PIN: 8662066568 Email address: ism@skytel.com	Maintenance
Voice CoE (Class 5)	2315 Salem Conyers, GA	5ESS, DMS, IOS, TDM Voice Mail, Remote Terminals	888-824-1091 or 770 785-4233	Maintenance
VoIP CoE	12976 Hollenberg Dr. Bridgeton, MO	CVoIP, BVoIP, GVoIP, AVoIP	800-225-3790 Prompt 7	Maintenance

Work Center	Location	List of Technologies/ Functions	Contact Number	Provisioning or Maintenance
AT&T Managed Operations - Mesa	1231 W. University Dr. Mesa, Az. 85201	CDRP & AMA Billing	CDRP - 480-225-7002 AMA Billing - 888-858-7243 Pin #134434	

1.4. Installation Test and Acceptance Process Issues

Installation Test and Acceptance Process Issues should be directed to the appropriate Installation Support Team Member (for NFS questions), InfoSWAP MainPage, or to the appropriate Installation Performance and Assurance Team Member (for Installation Supplier questions), as indicated on the **http://www.infoswap.att.com** - InfoSWAP web site.

1.5. Minicomputer Maintenance & Operations Center (MMOC)

This section provides telephone numbers to call for all OSS events if neither you nor your supervisor is able to answer "yes" to all of the ten "Ask Yourself" questions, or if your supervisor is unavailable. If all trouble desk help and all normal channels have been unsuccessful in resolving your questions, or if you are facing an emergency, call the appropriate manager listed in the table below. The list of managers is organized by MMOC Center.

1.5.1. MMOC Telephone Numbers

CENTER	NAME	PHONE	PAGER
Atlanta	Trouble Desk	1-866-285-6662	
Manager	Shirley Mensching	1-404-614-5858	1-888-858-7243 PIN 112082
Chicago	Trouble Desk	1-800-272-6642	
Manger	Michael Grochowski	1-312-831-6256	1-888-858-7243 Pin 106026
Denver	Trouble Desk	1-800-432-6662	
Manager	Lyle Auld	1-303-480-4062	
Kansas City	Trouble Desk	1-888-486-9227	
Manager	Jim Clock	1-816-391-4720	1-888-858-7243 Pin 136322

CENTER	NAME	PHONE	PAGER
White Plains	Trouble Desk	1-914-397-7345	
Manager	John Powers	1-914-397-5210	1-888-858-7243 Pin 135931
NSDNET	Trouble Desk	1-816-391-5700	
Manager	Mike Peck	1-816-391-2489	1-800-494-0834

1.6. Customer Service Specific Work Centers

The following web site lists all the Worldwide locations Customer Service Specific Work Centers Worldwide Customer Service Intranet.

1.6.1. Service Assurance

Maintenance:

- Global Customer Connectivity Maintenance

- **http://gem/leadership/escalations/escalations.cfm** - Global Enablement & Maintenance

1.6.2. Service Delivery

Provisioning

- Access Supplier Management

- High Speed

- Local Provisioning

Ordering

- **http://gem/index.cfm** - Global Enablement & Maintenance

- LSDD Data Centers of Excellence

- [Voice & Data COE](#)

- **http://myinfocenter.att.com/portal45/mypage/mypage.asp?UserID=184151&** - Voice SDP

1.7. Escort Policy

There are 3 drivers to consider when challenged with Escort issues. These drivers are Security, Network Reliability/Risk Management and, from an Installation Test and Acceptance standpoint, rapid and efficient deployment of customer-serving capacity. Security guidelines regarding escorts for contractors/suppliers are clearly defined in Corporate Security's Admission to AT&T Premises (CSI1.01) found at web site **http://www.security.att.com**. Below are criteria to be considered when making a Risk Management decision on whether a contractor/supplier escort is required.

Protecting customer service is of utmost importance. However, a sound risk management policy balances this against the cost to provide that protection-in this case, having otherwise productive technicians escort contractors. Further, in the case of Installation, Test and Acceptance, certified Installation Suppliers have assumed a much greater role in the vital deployment of capacity in AT&T's network. This role will continue to grow.

Rules reflecting escort/admittance and coverage requirements for installation supply work for various types of offices are outlined in Ask Yourself Section 2.5.1. Office coverage matrices are found on the ITA home page (internal) and the Infoswap web site (external). Because no policy could possibly address every situation, decisions involving contractor/supplier escort must be made on a case by case basis and ultimately are the responsibility of the On-site Supervisor. However, the following criteria should be considered:

- Contractors/Suppliers must be familiar with activities being performed and adhere to the Ask Yourself guidelines. The provisions of Ask Yourself Section 2.5.2.4 apply to all contractors/suppliers. All contractor/supplier personnel must be trained in AT&T's Supplier Awareness and be able to present proof (green or red cards) that they have passed the course.

- Potential impact to Critical service and/or customer must be considered. In the case of Installation Suppliers, Ask Yourself Section 2.4.1.1 [Critical Steps] applies.

- The more complex, risky, and potentially higher impacting activities should be given careful scrutiny. In the case of Installation Suppliers, Ask Yourself Section 2.4.1.1 [Critical Steps] applies.

- Contractor's skill level and knowledge must be assessed and deemed appropriate. In the case of Installation Suppliers, Ask Yourself Section 2.5.1.3 applies

- Contractor must be involved in Physical Walk-through of activity. For Installation Suppliers, the provisions of Ask Yourself Section 2.5.2.3 apply

- Maintenance response time in the event of a service interruption must not be jeopardized. Actions required of Installation Suppliers in the event of service interruptions or degradations are spelled out in Ask Yourself Section 2.7.

- The NFS must promptly provide access to company facilities for contractor/supplier personnel bearing the proper credentials and must ensure that the contractor/supplier has a number to call for questions or in the event of a service interruption. See Ask Yourself Section 2.5.1.2

- Providing an escort should not jeopardize more critical installation, provisioning or maintenance work. Rules for escort/accompaniment for Installation Supplier personnel are found in Ask Yourself Section 2.5.1.1 and are also available via the ITA home page and the **http://www.infoswap.att.com** - InfoSWAP external web site.

2. Change Management Records

2.1. Introduction

This section will provide supporting information for two of the "Ask Yourself" questions introduced in section 1, Service Protection:

Question 7: Are the required work order, MOP, and supporting documentation current and error-free?

Change Records can cover activities, ranging from a one-time implementation, a life cycle change that will be executed repeatedly, emergency maintenance, etc. A Method of Procedure (MOP) is typically written by an AT&T Labs organization, equipment vendor, or Advanced Technical Support (ATS) but could also be written by other network support organizations. ATS approval will be required for those procedures involving high risk/high impact Network Events. Vendor developed MOPs will also require ATS approval and should meet the standards established within the guidelines for all Network Events.

A MOP is also input to support a Change Record, which includes additional plans for the Network Event, such as when it is scheduled, who will do the work, etc. The MOP is the set of technical steps associated with a work activity and the Change Record is for a specific site or element implementation, such as a software upgrade for multiple elements, and is typically provided by the organization performing the work. A new separate MOP is not always written for every Change Record but a Change Record is required for all Network Events and the submitter will be required to provide accurate site and element specific information.

Question 9: Have I walked through the procedure?

Since its inception in 1992, the Ask Yourself Program has evolved from a philosophy to the way we do business. Our commitment to Network Reliability, along with the increased levels of technical difficulty and the ever growing potential for high-impact service outages, has resulted in the need to develop more clearly defined methods of work procedures.

2.2. Change Management Process

Change Management is used because AT&T is responsible for customer service and must be in total control of the Network and all its elements. Our traditional MOP view (i.e. a technically correct procedure) is not always sufficient toward

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providing flawless service. The Change Management process is more inclusive than the MOP. The Change Management Process addresses ALL the key elements that every work plan contains.

Benefits of using the Change Management Process include the following:

•   Enables "Yes" answers to the "Ask Yourself" questions

•   Provides detailed procedure to implement planned Network Event

•   Insures that the service impact of work to be performed is addressed

•   Provides essential information to protect customer service (back out procedures, customer notification strategy, and dedicated customer coverage)

•   Provide technical references

•   Creates "one action" technical steps

•   Incorporates the technical, process, and office specifics for the work to be done

The Change Record and MOP are an integral part of the Change Management Process and thus insures the best opportunity to reach a positive response to the ten AYS questions.

2.2.1. What is Change Management

Ask Yourself is the process which governs all planned work on AT&T's Global Network. The Change Management Process seeks to operationalize AYS to ensure work is conducted at the appropriate time with the appropriate notifications to allow AT&T to continually maintain and improve the most reliable network in the world. In order to do this, the Change Management process not only reviews the planned work internal to AT&T's network it also addresses conflicts with other work occurring in the network, including significant events occurring near our network facilities to balance and minimize the risk to our network and ensures flawless service for our customers. The Change Management process includes Network Events, Network Restrictions declarations, Quiet Period notifications and Mass Calling events.

2.2.2. What is a Change Record

The Change Record is the documented record of any Network Event occurring in the AT&T Network. The Change Record is used to keep track of all Network Events for technical review and specific approval. The Change Record is entered and processed through the AOTS-CM system tool. The Change Record includes:

•   Submitter contact information

•   Set of technical steps or MOP associated with the work activity

- Site specific information such as FIC location and CLLI code

- Approver contact information

- Conflict Identification

2.2.3. What is a MOP?

A MOP is the Method of Procedure for any work activity. The MOP is the set of technical steps that identifies the specific sequence of activities required to accomplish a particular work activity. Each technical step must be detailed and contain one specific action to be performed and should reference supporting vendor technical documentation where applicable. A thoroughly prepared MOP will include:

- Steps for NRC notification

- Detailed technical steps

- Back out procedures

- Potential service impact

- Possible "WHAT IF" scenarios

MOP (Method of Procedure), engineering, design and installation work policies Legacy engineering and installation practices currently remain in place for all AT&T Network Elements. Legacy processes govern MOP approvals, access & coverage requirements. **Work Scheduling must be consistent with the appropriate technology maintenance windows found in the AT&T Ask Yourself Handbook found at;**http://www.qms.att.com/odms/NM/NPQ/GENERAL-METHODS/NCS/148/010-515-170.html Work is currently underway to adopt one MOP process for engineering, design, and installation of network elements. Until one AT&T Change Management process is adopted, existing practices are to be followed, governed by the legacy of the network element.

- **Legacy T elements will use legacy T processes, SNEM and AT&T 002-200-715, Ask Yourself**

- **Legacy S elements will use legacy S processes, TP76300**

- **Legacy B elements will use legacy B processes, TR73503 see bulletin QIB2006-002**

Corporate Real Estate work in AT&T central office buildings will be managed using the CRE MOP form, CRE-01-31-10-FRM-001. This new standard process is in effect nationwide and is based on the Ask Yourself principles. It will be necessary for employees managing changes in elements from more than one legacy company to embrace the legacy operating processes and standards appropriate for each legacy network element.

2.2.4. What is a Network Event

A network event is defined as any planned work that has the potential to interrupt or degrade AT&T Customer service. Network Event activities are described, by technology in the Ask Yourself Handbook. All Network Events should be tracked under a Change Record in AOTS-CM.

2.3. Do I need a Change Record?

A Change Record is required for:

• Any work outlined in the AYS Handbook which requires a network event.

• Any work done by an installation supplier, whether or not a network event is required as per the AYS Handbook.

• Any work without a documented ATS-approved Method of Procedure.

• Examples of this type of activity include but are not limited to:

   ° Work that could interrupt an entire node, service type, customer set, or critical service

   ° Equipment installation, growth, or removal

   ° Power activities (common plants)

   ° Inventory conversions (e.g., MUX change out, ACCESS - FAOS, DRO, ECS, etc.)

   ° For buildings work only, when in doubt as to whether a SMOP is required, contact the ATS SME for your technology.

2.4. What type of information is included in a Change Record?

All pertinent information surrounding the work activity is included in the Change Record. Each Change Record consists of several tabs or pages of information necessary to process the Change Record. The information will include but is not limited to:

• Category, Type and Item (CTI)

• General information pertaining to the Change Record

• Specific dates of when the work will be performed

- Business Risk and Technical Risk as dictated by the Ask Yourself Handbook

- Testing and Backout plans

- Specific location, technology and component identification information

- MOP specific information

- Approver information

- Conflict ID information

All MOPs will be located in a central repository and accessible to internal employees and approved vendors with proper access.

2.4.1. Category, Type and Item (CTI)

CTI stands for Category, Type and Item and it is the basic template used for each Change Request. Each type of work activity and technology will have a pre-defined CTI associated with it. A specific CTI will need to be chosen when opening a Change Request. That CTI will designate which fields are mandatory and can also pre-populate certain fields if the data is static. A CTI can be built with specific pre-set approvers already associated with the CTI template.

2.4.2. Ask Yourself Risk Assessment

The Ask Yourself Handbook outlines a Risk Factor based on the potential impact to the network as defined by Subject Matter Experts (SME) for a given technology.

- **Risk Factors** (1-5) - Risk Factors are assigned by SMEs– Risk Factor 5 is the highest risk and 1 is the lowest risk. 5 is the default. 0=none 1=low 2=some 3=average 4=high 5=extreme

2.4.3. AOTS Business and Technical Risk

Business Risk is a determination of the affect on customer service that the work will have. The submitter must choose the level of affect.

- Disruptive

- Non-disruptive

- Non-disruptive due to diversity

- Performance Degradation

AOTS Business Technical risk is a determination of how much risk is inherent with the specific work itself. Some procedures are very complicated and involve lots of critical steps that make the entire MOP a high risk action.

Technical Risk Field Value		Planned End Date Field Value
BAU	And	Less than 2 days from today
Low	And	Less than 5 days from today
Medium	And	Less than 7 days from today
High	And	Less than 44 days from today
Exceptional	And	Less than 104 days from today

2.4.4. Backout Plan

Every Change Record must have a backout plan for the work being done. There must be stopping points within each procedure where the original condition can be restored should unwanted problems or errors occur. That backout plan must be detailed in the appropriate field on the Change Record.

2.4.5. Location, Technology and Component Information

There are fields to specify the physical locations of the work being done using a standard CLLI code. The CLLI code aids in Conflict ID and provides information for approvers to know where the work is being done. There are also fields to identify the specific components or equipment that are involved in the work activity. Accurate and specific identification are critical to the reviewers and approvers.

2.4.6. MOP

The MOP tab is the portion of the change record where the technical steps of the work activity are detailed. Each step of the MOP should be a single activity and specific dates and times can be specified for each step. In addition to the technical steps, the first and last step of every MOP should be to contact the responsible Network Reliability Center (NRC). The responsible NRC should be called before the work begins and after the work completes and the Change Record number should be referenced. A standard MOP can be attached to the Change Record for replicable work or specific MOP steps can be added individually to each Change Record. In either case, the MOP steps need to be approved by the appropriate ATS organization.

2.4.7. Approver Information

All Change Records will be approved by the appropriate (NRC), based on affected technology and other criteria. The Approvals tab allows the submitter to add additional approvers and view approval status of the Change Record. Approvers may need to be added when the MOP has not previously been approved by Advanced Technical Services or non-approved technical steps were added to an existing MOP

2.4.8. Conflict ID

Conflict ID is the most important part of the Change Record and the Change Management process. Conflict ID is the tool to determine what work might conflict with other work at the same time or on related equipment. The goal is the ensure network redundancy during work activities and that one work activity does not adversely affect some other work activity. The Conflict ID tab allows the submitter to search for other Change Requests that may conflict with the proposed Change Record, based on pre-built criteria under the CTI, along with the CLLI code, technology and equipment identification. If conflicts are generated, the submitter must investigate to determine if the conflict is valid and the work needs to be rescheduled or if the conflict is not valid and can be overridden.

2.5. How do I create a Change Record?

When AYS determines that a Change Record is required, the submitter will use the AOTS-CM system tool to enter in a Change Record. AOTS-CM is the one tool that all business units of AT&T will use for all Change Management functions. All required information must be entered into the Change Record and Conflict ID is then run. Conflict ID compares the requested work with other approved work using dates, times, CLLI locations and mated technologies. If other approved work is already scheduled, the tool will generate a conflict and the submitter will need to amend the Change Request to clear the conflict.

2.6. GNFO and Supplier Responsibilities

GNFO will be guided by the general policy that it is to provide support rather than proactive oversight for installation suppliers and their work. These rules apply:

•   Supplier personnel at Skill Levels 3 and 4 (TP76300) with more than 30 days of experience in AT&T locations will be allowed to work unaccompanied except during the execution of technical steps as defined in the Change Record where AT&T On-site Presence is Required. (See https://ebiznet.sbc.com/sbcnebs/Documents/TP76300/ATT-TP-76300-C.pdf)

•   Some AT&T Offices may require special attention for gaining access. Installation Suppliers are required to take full advantage of available Network Event Work hours (Maintenance Windows) while understanding it will be easier for all parties to perform work while AT&T GNFO is present

- In non-Switch locations (POPS and REGENS), supplier personnel at Skill Levels 3 and 4 are allowed unaccompanied access after an initial walk-through. This access is via assigned cylinder key or Electronic Access.

- Supplier personnel at Skill Levels 1 and 2 are not allowed to work without the direct supervision of a skill Level 3 or 4 in AT&T buildings, or to have unaccompanied access to the buildings. This direct supervision requirement by a supplier also applies to all temporary personnel obtained by the supplier from a sub-contracted employee service.

- GNFO personnel must ensure that Installation Suppliers are promptly provided access to company facilities in order to perform their work for AT&T , in accordance with TP76300 https://ebiznet.sbc.com/sbcnebs/Documents/TP76300/ ATT-TP-76300-C.pdf , Section 2.2. Installation Suppliers are employed to help AT&T with the rapid deployment of capacity and service. Therefore, all reasonable assistance should be provided to help suppliers accomplish their mission. Such assistance should extend to the protection of supplier and AT&T personnel and equipment, and of AT&T 's service. Both the supplier and the GNFO must make every attempt to accommodate each other on scheduling and access issues. Early notification must be done by suppliers and is the key to everyone's success.

- Installation suppliers are responsible for the actions of their employees, including subcontractors, while they are on AT&T premises.

> **NOTE:**
> **Suppliers working unaccompanied in "uncovered" AT&T facilities are required to answer telephone calls to the facilities; as such calls might involve a prevention or correction of a service interruption or degradation (See Section 2.7 below).**

Suppliers are responsible for managing the quality of their work. However, this must include, at the very least, the deployment of supplier personnel to AT&T sites who:

- Possess required competency skill levels in the technology being installed or removed which are defined in TP76300 https://ebiznet.sbc.com/sbcnebs/Documents/TP76300/ATT-TP-76300-C.pdf . . All installation competency skill levels require a complete understanding of the equipment installation or removal requirements and procedures associated with the work operation or job activity being performed. In addition, installers at Skill Level 4 and Skill Level 3 require a complete and in-depth understanding of the equipment installation and removal requirements detailed in the appropriate sections of TP76300 section C, and the requirements stated in the installation requirements of AT&T.

- Have the appropriate skill levels, as defined in TP76300 https://ebiznet.sbc.com/sbcnebs/Documents/TP76300/ ATT-TP-76300-C.pdf , section C, prominently and permanently displayed on their employee identification badges.

- Have the proper job documentation.

- Understand the criticality of their work.

- GNFO associates are empowered and required to interrupt, or stop the work, of any supplier when, through routine observation, it is deemed such action is necessary to protect employee safety, company property or customer service. All suppliers must instantly follow the orders of GNFO in such cases. When work is stopped, it is the

responsibility of the supplier to see that the issues at hand are resolved and that work resumes as expeditiously as possible.

Suppliers must comply with all requirements for equipment spelled out in both the AT&T Supplier Awareness Training, as well at the AT&T Network Awareness Training Certifications. In addition, all requirement and standards as specified by TP76300 https://ebiznet.sbc.com/sbcnebs/Documents/TP76300/ATT-TP-76300-C.pdf , and documents referenced therein, must be met by each installation supplier.

GNFO is not authorized to modify an equipment order, order installation work, or require a supplier to do additional installation work that is not directly associated with, and specified from, an equipment order placed by NP&E. GNFO requests for such modifications must go to AT&T NP&E.

Suppliers must follow defined escalation procedures to obtain additional office coverage, or to resolve problems. An AOTS – CM Change Record is required for every installation job. The installation supplier must post the approved Change Record at a mutually agreed upon location at the job site and keep a copy available on hand at all times. It must be posted for the entire job interval.

Installation suppliers are required to perform self-audits at the conclusion of each job, using form ATT 800-614-106. A completed and signed copy of this document must remain in the job folder at all times.

2.7. How do I execute a Change Record?

After the Change Record has been created and approved, and a Change Record number is assigned to the job, the implementation portion of the Change Management process begins. Each individual associated with this work activity, will play a critical role in the success of this mission. This requires a thorough understanding of the work at hand and a full appreciation of the amount and the importance of the service that may be affected.

The individual performing the work activity must have a complete copy of the approved Change Record and follow the detailed MOP precisely, check-point by check-point. Specific roles and responsibilities of any work groups involved must be completely understood before the work begins.

A walk-through must be performed prior to the start of the work activity to familiarize all involved parties. If the work activity continues over more than one tour, a review of the activities from the previous tour and a walk-through must occur before starting work.

Before the start of any actual work for the day, the supplier or work performer must call the NRCs responsible for the affected technologies or CTIs to advise of work start.

Packs, wires, and cables (office specifics) should be CLEARLY TAGGED prior to the start of the work to eliminate any confusion.

If, at any time, the actual response varies from that defined in the CR, the work activity should be halted until the discrepancy is resolved. This may require a request for help from the NRC, ATS, or the local on-site work force supervisor.

If this is a coordinated activity between on-site work force locations and/or the NRC or ATS, all personnel must use the same drawings and documentation. They must be able to determine which step is in process and validate all critical steps

in parallel. It is important that positive responses are received from all team members on every critical step before proceeding.

At the end of any actual work for the day, the supplier or work performer must call the NRCs responsible for the affected technologies or CTIs to advise of work stoppage.

Once all the work activity in the CR has been completed the CR Preparer must go back into AOTS-CM and close the CR. The CR must be closed with in 72 hours of the work being completed.

2.8. Service Interruptions and Degradations (Installation Suppliers)

Reporting of Service Interruptions and Degradations:

If a service interruption occurs, immediate restoration of service is a joint responsibility between the Installation Supplier and AT&T as outlined in the MOP.

In the event of a service interruption attributable to the installation work being performed, the Installation Supplier must:

1. Immediately notify the NRC (identified on the emergency telephone list in the MOP) and then proceed with restoration procedures, as instructed by the NRC.

2. At the conclusion of the restoration, or within 24 hours, the Installation Supplier must report the interruption to AT&T NP&E Engineer or the appropriate AT&T group responsible for the overall work.

3. Within 5 days, a written report must be provided to the responsible GNFO supervisor and the NP&E Engineer or the appropriate AT&T group responsible for the overall work. The written report must include the following information:

   • The reason for the report (reporting an outage)

   • The Installation Supplier's company name

   • The name of the Installation Supplier's representative writing the report

   • Address and telephone number of the Installation Supplier

   • The location where the outage occurred and the site telephone number

   • The AT&T Order Number, or Telephone Equipment Order Number, AT&T Engineer, and Job Supervisor's name, telephone, and pager numbers

   • The date and time of the outage and its duration

   • A concise description of the type or nature of the outage, detailed description of work being performed at the time, events leading to the outage, and restoral steps.

A GNFO representative must report any observed service interruptions or jeopardized service to the Installation Supplier. GNFO may require immediate suspension of the installation/removal activity and possible implementation of restoration plans.

By carefully following the Change Record and "Ask Yourself" process, we can all ensure that service, which is of such critical importance to our customers and our company, will be protected. Thank you for taking the time to "Ask Yourself".

3. Work Schedule Guidelines

3.1. Introduction

This section together with section 4, Network Events Guidelines, provide supporting information for one of the 'Ask Yourself' questions introduced in section 1, Service Protection:

Question 5: Is it the right time to do the work?

The work schedule guidelines provided in this section will help you determine the appropriate time for performing network service to minimize potential impact on customers and network operations.

The decision of when to perform a service should be based on the impact that a process failure can have on our customers, not on how well we believe we can execute the change or the probability of process success. In addition, the impact of an unsuccessful execution of a planned activity on the Network, regardless of whether it is a routine operation, should weigh into the decision.

In the interest of simplification, Chapters 3 and 4 of the Ask Yourself Handbook generalize work activities and specify the time windows in which they can be performed. Within these general projects are work activities of varying degrees of risk. By identifying these activities and their criticality, work can generally be spread around the clock. Doing this takes more planning and good resource management, but allows much more work to be done without increasing the risk to the network. In individual cases, we have actually taken calculated risks by opening the window where the expected benefits outweighed the increased risk. However, in general, breaking down work activities and scheduling them according to their risk levels eliminates most bottlenecks.

With these general principles in mind, this section gives guidelines for determining when to perform switching and signaling, facilities, power, and infrastructure activities. In this section, all times are local unless otherwise noted. Section 4 of this handbook , Network Events Guidelines, provides matrices summarizing the hours of work requirements specified in the Work Schedule Guidelines. The matrices have been revised to reflect newly determined monitoring requirements by AT&T for network equipment installation and building infrastructure work. These requirements are shown as red, yellow, or green steps, depending on their criticality.

3.2. Primary Guidelines

All work in the Domestic Network that involves changes in service affecting databases, network element software, hardware configurations and the environment surrounding those elements will be done during the 6:00 p.m. to 6:00 a.m. period. More critical activities are restricted to the times indicated in section 4 for each technology involved. Generally, work authorized during normal business hours is allowable on weekends.

WORK RESTRICTIONS FOR THE PERIOD PRIOR TO THANKSGIVING AND BETWEEN THE NEW YEAR, AS WELL AS OTHER PEAK PERIODS, ARE DETERMINED BY THE GNOC & AVAILABLE FOR REVIEW AT THE GNOC WEB SITE .

NOTES:

• For work related to 5ESS, refer to the 5ESS Network Events Matrix (section 4).

• All exceptions must be reviewed on a case-by-case basis via the Exception Process outlined on the GNOC WEB STIE .

• When preparing the SMOP associated with planned work, the involved parties should concur regarding the hours of work indicated for particular steps in the process. For example, preparations for a DACS change notice might be performed prior to midnight, while the more critical steps would be performed between midnight and 6:00 a.m.

1. No two related network elements should perform High Risk work at the same time (e.g., 4Es in the same building or mated STPs, etc.).

2. Concurrent work on more than one critical network element in a local geographic area will not be permitted (e.g., only one switch or one DACS in the NY metropolitan area can be worked on at a time).

3. When performing work on two similar elements on the same night, in different markets/geographic areas in the country, the critical activity that might put the element at risk (e.g., boot) will be performed at different schedule times.

   NOTES:

   • The following interpretation is offered as an explanation for guidelines stated in the Network Operations Ask Yourself Handbook. The intention is to clear up any misunderstandings associated with times work can be performed in the Network, specifically 4ESS activities, that have been identified as the largest concern. This interpretation, in part, will explain section 3.2 - Primary Guidelines - guideline 3 and section 4.4.2.1. - Network Event Matrix - 4ESS - table 4-9. This explanation contains input from the 4ESS Subject Matter Experts who author the Guidelines contained within the Matrix.

   • Section 3.2, guideline 3, states 'Concurrent work on more than one critical network element in a local geographic area will not be permitted (e.g., only one switch or one DACS in the NY metropolitan area can be worked on at a time).' The word 'work' in this case does not mean total SMOP/Network Event, but rather refers to an activity or portion of the SMOP/Network Event that is deemed a potential threat to the Network. In other words, a critical step or steps within the SMOP/Network Event. The word 'critical' in this case refers to critical offices (formally called Top 137 offices). For current office priority listing go to; http:// gnoc.web.att.com/pdf_3p/2009_Most_Critical_Bldgs_01_15_09.xls . To summarize, guideline 3

suggests critical activities, such as boots, intrusive power work, or connections to a live bus, not be performed in more than one critical office at the same time in the same geographic area.

- Section 4.4.2.1, Network Event Matrix - 4ESS, is intended to provide guidelines as to when certain 4ESS activities may be performed with acceptable risk to the Network. While some of these activities outlined in the Matrix are critical, they all have preparatory work that can be performed outside of restrictive windows. Weekend work is allowable; the only activities not allowed out of the restrictive windows on weekends, as outlined in table 4-9 are Power, Air Conditioning, AC Panel, 1B Hardware, 3B Hardware, and Ring Hardware. All other 4ESS activities can be performed anytime during the weekend. The weekend maintenance window is defined as a continuous maintenance session starting at 6 p.m. Friday and concluding 6 a.m. Monday.

4. Risk should be assessed based on the impact that a process failure can have on AT&T customers, NOT on how well we believe we can execute the change or the probability of process success.

5. The impact a planned activity would have on the Network if not completed successfully must be determined in advance. For example, a single T3 change, if it failed, would have a low impact while an unsuccessful CN on a DACS3 would have a high impact.

Exceptions to, or discretion applied to, these guidelines will be made during the SMOP review process by the appropriate Subject Matter Expert (SME) An additional level of oversight will be applied by the GNOC. The ultimate decision to authorize work activity rests with the GNOC.

For work not directly addressed by these guidelines, the responsibility for ensuring that all involved parties concur with when and how the work is completed rests with the requesting party.

All AT&T employees are empowered to challenge work they consider to be in violation of these guidelines.

UNRESOLVED CONFLICTS PERTAINING TO THESE GUIDELINES SHOULD BE ESCALATED TO THE NEXT LEVEL OF AUTHORITY. The driver of escalation should be the needs of serving our external customer, NOT internal hierarchy.

3.2.1. Restricted Work Period

To help mitigate risk to AT&T's network and to ensure continuous and reliable service to its customers, work restrictions have been imposed by the Global Network Operations Center (GNOC) for certain network activities on specific days throughout the year.

The levels of restrictions are intended to minimize risk and protect AT&T's brand name while, at the same time, maximize work productivity. These restrictions were defined and published by the GNOC. They were developed in consideration of business calling volumes and sensitive days, as well as the levels of perceived risks of certain types of work activities.

To view the Restricted Work Day Schedule, along with the types of restrictions, internal users should visit the GNOC web-site . This document is also located at the Infoswap web-site (external users).

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3.2.2. International Service Considerations

Work with the potential to disrupt International Service (i.e., CNI, Power, office dependent data, DACS, Reboots, and Retrofits) should, when possible, be scheduled using the following guidelines:

1. All work which is performed on Consortium owned equipment, Cable System equipment or OCC equipment including changes in service affecting databases, network element software, hardware configurations, and the environment surrounding International Undersea Cable & Cable Station elements must follow the maintenance windows outlined here:

Cable Region	Maintenance Window
Atlantic Region	23:00- 06:00 UTC
Pacific Region	16:00- 22:00 UTC
Caribbean Region	06:00- 12:00 UTC
Central America East Region	06:00- 12:00 UTC
Central America West Region	16:00 - 22:00 UTC

2. All planned work that involves AT&T owned transport equipment or switching equipment which interfaces to the Undersea Cable system should be done when the lowest traffic volumes are on the equipment. In order to determine the best time to plan work you will need to refer to the busy hour data for the specific countries which the equipment is serving. The most current data for making this determination can be found in the Capacity Utilization reports at : \\gab200srvr04\cur

3. Once you access the site you will see a folder called capacity utilization reports. Open the folder and choose the report that you want to view. There are partial week reports called Cap_use_current, where you can see up through midnight (UTC) of the previous day. The full week reports are called Cap_use_week. Once you open the specific excel file use the drop down in cell B2 to select the specific countries the equipment is serving. This will provide you with the best data in UTC to make your decision.

3.3. Activities Covered

3.3.1. Activities Not Restricted

Certain activities may be performed during all hours of the day under the direction of the appropriate support organization. The following are a few examples that may be worked during the day if the integrity of the network is not at risk:

- Repair of equipment that has interrupted service

- Repair of equipment that is in a service degrading condition.

- Repair of equipment that is essential to our ability to provide service (e.g., order wires, surveillance equipment, Operations Support Systems).

Routines may be performed during normal business hours when no service jeopardies exist (e.g., visual inspections, battery readings).

Installation of new equipment will be allowed during normal business hours as long as there is no contact or integration with working/existing equipment or infrastructure systems that could potentially impact the Network. If unsure, contact the appropriate technology SME for assistance in determining when to perform work. More specific examples are listed in the matrices in section 4.

3.3.2. Switching and Signaling

3.3.2.1. General

Per section 3.3.1 above, certain activities may be performed during normal business hours. However, for Switching and Signaling, all activities will be performed with concurrence or as directed, by the NRC.

The weekend maintenance window is defined as a continuous maintenance session starting at 6:00 p.m. Friday and concluding at 6:00 a.m. Monday.

NOTE:
For the specific times work may be performed for a particular technology, consult the Network Event Matrices in sections 4.

3.3.2.2. International Service

Work performed in switches serving as International Gateways, with the potential to impact international traffic, should be scheduled with consideration as to the countries served by the switch. Work performed in gateway switches located on the East Coast should be scheduled earlier in the work window (closer to 2000 NWT), while work performed in gateway switches located on the West Coast should be scheduled later in the work window (after 0300 NWT). See Table 3-1 for Network Time Conversion.

NOTE:
For additional International Service considerations, see Chapter 9 section 9.4.2

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3.3.2.3. Change Notices

CN's are routinely performed from 10 p.m. to 6 a.m., with software updates requiring a boot being scheduled so the boot takes place after midnight. For the specific times a CN may be performed for a particular technology, consult the Network Event Matrices in sections 4.

3.3.2.4. NCP Software Updates

NCP Software Updates will be performed according to the specific application of the technology or as directed by the NRC SME.

3.3.2.5. STP Software Updates

STP Software Updates will be performed according to the specific application of the technology (i.e., domestic, international, government, etc.) or as directed by the NRC SME (applies only to STP-I's).

3.3.2.6. Synchronization

Per section 3.3.1, certain activities may be performed during normal business hours. However, all activities involving synchronization maintenance and trouble resolution will be performed with the concurrence of, or under the direction of, the Network Synchronization Support Center/Sync- Maintenance Engineer.

3.3.2.7. Signaling Network Provisioning

> **NOTE:**
> **For the specific times work may be performed for a particular technology, consult the Network Event Matrices in sections 4.**

3.3.3. Facilities

3.3.3.1. Provisioning and Maintenance

3.3.3.1.1. T3 and Above

Provisioning and Maintenance work at the T3 level will be permitted during the normal business day if there is no impact to customer service. Nationally directed projects (e.g., C-Bit, DACS 3 Embedded Rolls, DACS 4 Cuts) will usually have hours specified as part of the project. Under no circumstance should work activities in the backplane of an in-service bay be permitted during normal business hours (unless the Quad can be rerouted on overhead restoration).

> **NOTE:**
> **For the specific times work may be performed for a particular technology, consult the Network Event Matrices in sections 4.**

3.3.3.2. Installation/Augments

New equipment installation will be allowed during the normal business day as long as there is no contact with working/ existing equipment. Acceptable normal business day activity includes placing of cable that does not cross Power or any Processor-Controlled Equipment, databasing of the equipment, testing of that database, and installation of that out-of-service equipment. Under no circumstance should work activities in the backplane of an in-service bay be permitted during normal business hours (unless the Quad can be rerouted on overhead restoration).

> **NOTE:**
> **When placing cable in racks, be sure to check all technologies matrices that may apply.**

Change notice activity on service carrying equipment will be performed during the hours specified in the SMOP associated with the change notice. All domestic DACS and Power change notices will be performed midnight to 6:00 a.m. DACS and Power change notices performed on network elements that carry International Traffic should be coordinated with the International Transport Servicing Center in order to minimize total Network impact.

> **NOTE:**
> **For the specific times work may be performed for a particular technology, consult the Network Event Matrices in sections 4.**

> **NOTE:**
> **Refer to the International Chapter 9 for additional information.**

3.3.3.3. DACS/MUX

Work involving the Main Controller, Unit Controller, I/O Bay, Power Units, Center Stage or Disk/Tape drives must be confined to the hours of midnight to 6:00 a.m. Work must start and complete within these hours.

Daily backups are done automatically via DEMS for all DACS-III, DACS-IV, and Alcatel 1631's. The optical cartridge should be changed between noon and 1:00 p.m. weekly. DACS 4/256 machines need weekly tape backups performed at the start of the day tour, but no later than 8:00 a.m. An exception to this requirement may be allowed during or after a restoration event when a database backup is warranted. Exception backups such as these will be directed by the Restoration Management Group.

International Service: Work performed in DACS Frames that carry International Traffic should be coordinated with the International Transport Servicing Center in order to minimize total Network impact.

> **NOTE:**
> **Refer to the International section of this handbook (section 9) for additional information.**

Not more than one DACS frame will be worked on at the same time and/or at the same location. Multiple DACS frames can be worked on in the same location ONLY if the work on each DACS frame is successfully completed before beginning work on the next DACS frame. NRC will analyze work requests to ensure geographical and sequential (in time) separation of DACS work. When work is being performed, the location and the NRC will communicate on the SMOP operation.

3.3.3.4. Cable Mining

Cable mining in an in-service cable rack (racks carrying any power/transmission cables connected to in-service equipment) will be performed from midnight to 6:00 a.m. Cable mining is permitted during normal business hours if there is no service in the racks. Absolutely no climbing on any cable racks is permitted at any time. Also, see Table 4-1, General Activities.

3.3.3.5. Microwave Radio

Radio activity that can be accomplished with a short term release (where the facility can be returned to service in five minutes or less), may be performed during normal business hours. Long term release activity will be performed 6:00 p.m. to 6:00 a.m. or on weekends. Call the appropriate Radio SME if you have questions pertaining to this process.

3.3.3.6. Central Office Common Equipment

Routines or rearrangements to these equipment types will be performed from midnight to 6:00 a.m., including, but not limited to, timing supply, sync supply and frequency supply.

3.3.4. Outside Plant Facilities

3.3.4.1. Planned Cable Intrusions (PCI)

Any activity that involves exposing the cable core tube or fibers is a PCI. Cable cutovers and the installation of 2400 type closures are Network Events. The NFS, OSPEC, and CNMC normally start the coordination process several weeks prior to the event. The CNMC schedules PCI's considering other OSP and Network activity. The CNMC will interface with the GNOC, FMG, and RNM groups in evaluating planned and real-time activities that can jeopardize Network Reliability. PCI's will not be scheduled on Peak Days and the period from Thanksgiving to the New Year (Restricted Work Period) with the exception of work driven by external parties and critical work activity. During the 'Restricted Work Period', PCIs generated by requests from the Department of Transportation, Railroads, the Army Corps of Engineers, and Municipalities will be reviewed on an individual basis. Notification must be given to the CNMC prior to any cable rearrangement activity within the hand-dig zone.

3.3.4.2. Testing Spare Fibers

Spare fibers in an interconnect cabinet (LSCIE, LSCIT, LGX) can be tested during NORMAL BUSINESS hours Monday through Friday. A Network Event is not required. To insure Network Reliability, the NFS technician calls the CNMC prior to the start and upon completion of the procedure, as they do for other low risk OSP activities.

3.3.4.3. Fiber Repair

A.   Defective fibers can be repaired during NORMAL BUSINESS hours. A NETWORK EVENT is required.

B.   The repaired fiber(s) must be tested with the OTDR and SMOLTS.

C.   If the repaired fiber needs to be returned to service, the switching must be done after 6:00 p.m. local time.

3.3.4.4. 2400/ UCA3-6 Closure Installation

Installation of 2400/UCA3-6 Closures is permitted during NORMAL BUSINESS hours. A Network Event is required.

3.3.4.5. Lightguide Cable Installation and Removal

Lightguide cable installation and removal in common conduit systems containing more than one lightguide cable will be done in accordance with the 'Work Schedule Guidelines' (see matrix for OSP). All prep work, including cable identification, cable marking, and removal after the cut, may be done at any time. Please call the CNMC or the appropriate OSP SME if there are any questions pertaining to this process.

3.3.4.6. Bonding and Grounding Activity

Bonding and grounding is considered a 'Potentially Hazardous Condition', not a Network Event. This means there is no time restriction. Personnel performing this type work should call the CNMC just prior to starting and at the completion of work that day. If conditions arise that jeopardize Network Reliability, certain work activities may be stopped. Bonding and grounding work includes adding filters and arrestors or any work that does not require a sheath opening or opening of the UCB1 closure inner splice cover. Opening the UCB1 end caps for inspection and cleaning is permissible.

CAUTION: If inspection reveals improper termination or any other trouble, do not continue. Replace the cover and schedule a network event. Call the appropriate OSP SME or the CNMC if you have any questions.

3.3.5. Power

3.3.5.1. AC Power Failure

Each office must have a method of procedure to follow in the event of utility AC power failure. Development of these procedures is covered in AT&T Practice 154-001-100AC. A copy of these procedures must be readily available in each power room. Refer to AT&T Practice 154-001-100AC for DC power plant restoration procedures when AC is restored.

An appropriate time to return to commercial power should be considered before making the transfer.

Before transferring back to commercial power, wait an appropriate interval to insure the commercial power is stable and not likely to fail again.

The Building Infrastructure systems, in support of Safety and Network Reliability, must be given a priority.

NOTE:
A physical walk-through of central office power plants is required and essential after every transfer of electrical power.

3.3.5.2. AC/DC Power Maintenance, Construction, and Removal

In the continuing effort to improve and refine the power process, major revisions have been made in the Network Events Power Matrix. With input from the Power Technical Support Group, Power Generation Group, Power Development, Maintenance Standards, and Power Maintenance Service application team, the guidelines allow for better time and resource management for completion of the current capital initiatives.

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The following considerations have been made:

To facilitate locating activity references, planned activities have been arranged by:

- Routines

- DC power

- AC power

- Shared activities

To assist in managing power related work potential impact on AT&T's customers, the building categories have been expanded to:

- Critical Offices (Top 137)

- Terminal Offices (any office with terminating equipment)

- Regens and Radio Repeaters

- Critical and Terminal Offices

- All Locations

1. Time guidelines have been revised to better reflect the potential impact to AT&T customers versus the cost of performing the work.

2. While continuing to maintain acceptable risk levels, the guidelines have been revised to effectively use the extended Battery Hour Reserve gained through capital investment projects.

3. The engineered protection provided by DC power plants for the facility and switching equipment influenced the guideline revision for AC power.

4. The guidelines for engine runs with full load transfer were revised to take advantage of the availability of trained personnel and commercial power in the event of problems. The new guidelines also allow for transfer before and after peak Network hours.

3.3.5.3. Engine Runs (Diesel and Turbine)

Engine runs for both routines and during utility AC power failure shall follow the procedures outlined in AT&T Practice 154-001-000AC, 'Network Power Management' and Power Seed Document PWR-SD-001-04/94.

3.3.5.4. Power Curtailment

AT&T is in the process of evaluating contractual power curtailment agreements on a case by case basis. AT&T is working closely with the local power companies to be aware of potential emergencies with the supply of commercial power. In many cases, AT&T will retain the freedom to independently evaluate the advisability of switching to alternate power with a consumption rate that is advantageous for AT&T.

All requests by power companies to shed power, whether under a curtailment contract or not, will be treated as a full load test and must be filed with the NRC Power Module on a verbal basis immediately. Due to short notice, no written report is necessary.

NOTE:
On a case-by-case basis, when it is probable that a commercial power reduction or loss of power will occur, the NFS may make a controlled transfer to its standby power system. During all Power Curtailment engine runs a minimum of:

- 1-AC Power Qualified Technician shall be on site.

- 1-DC Power Qualified Technician shall be on site.

- No fewer than 2 technicians shall be on site during and after the load transition.

3.3.5.5. Required Power Notification for Collocation Customers/Vendors in Central Offices (CO)

There are three product offerings under which customers/vendors contract for collocation space in the Common Access Area (CAA) of a CO:

- NCS (Network Collocation Service, formerly known as Licensed Space Agreement or LSA) - These are end-user customers who collocate service-enhancing equipment (e.g.: servers, routers, etc.) and connect to AT&T access and network services.

- Basic Customer Provided Access (BCPA) - These are end-user customers who provide their own access facilities and terminating equipment (e.g.: SONET mux) and connect to AT&T network services.

- Common Interface Arrangement (CIA) - These are access providers who bring access facilities and terminating equipment to a CO to enable them to provide access to multiple customers that wish to connect to AT&T network services.

For any scheduled power work in a CO that may cause an outage or power surge to customer/vendor equipment located in the CO, the NFS Supervisor will contact the appropriate potentially affected customers or customers' Account Team at least two weeks in advance of the impacting power work so the customer can take any necessary precautions for the scheduled power outage.

The NFS should maintain a list of all customers and access providers who have collocation space in the CAA and therefore may be affected by a power activity. All installations in the CAA are managed by the Custom Access Services (CAS) organization. The OWSF supervisor receives a copy of the CAS Project Letter for each installation; this Project Letter identifies the customer/vendor name, FIC code and power being installed. In addition, a list of NCS and BCPA customers is available at the following location on the NCS website: http://marketing.web.att.com/oil/data/access/ncls/productinfo/technicalinfo/lsac.xls .

To open this spreadsheet you must enter the password: lsac.

A list of CIA vendors is available on the CAS website: http://webshare.bsi.att.com/cas/ , go to the section Contracts/Products and select Signed CIA for CLECs and Signed ILEC for ILECs. However to view the actual POP offices these vendors are collocated access the IRIS system (Interactive Response Implementation System) via; http://webfarm.bsi.att.com/iris/resreq/projlogin.asp

A User ID is required to access the system. The IRIS User ID Request Form can be found on the CAS website, see above, in the IRIS section. Submit the completed request to Bonny Elliott, bnelliott@att.com

Under certain conditions a customer/vendor may require that the power to their collocation space be activated/deactivated. In order to do so, they will be required to make these arrangements through the Lease Space Arrangement Center (LSAC) which is their single point of contact to AT&T.

The following are the reasons for customers/vendors to use the LSAC:

•   To request power activation/deactivation

•   To schedule admittance to the CO for the customer or customer's agent.

•   To request On Site Assistance at a CO.

•   To check on status of a previously placed request.

•   To escalate on a previously placed request.

The collocation customer (NCS/LSA or BCPA) or CIA Vendor should call the LSAC on 1 800 622-7378, Press Prompt 4, then Prompt 2 or they may use the E-Ticketing method at the following URL: https://www.e-access.att.com/ewms/

The collocation customer will receive a WMS (Work Management System) ticket number confirming their request from either the LSAC associate or one will be generated via the E-Ticketing system. An LSAC associate will review the automated request and then call the collocation customer back in approximately 1 hour after the collocation customer made the initial call or the creation of the E-Ticket. The LSAC associate will confirm the information with the collocation customer and forward the WMS ticket to the appropriate CO.

As part of the installation process the customers/vendors have been advised that in order to gain admittance to the CO they (or their agents) will need to obtain the appropriate Supplier Awareness training which is available (for a small fee) by calling 1 800-872-4637. The course number is OW0056AS.

For general information about the NCS or BCPA product offerings the NFS and Sales Account Teams can visit:

NCS URL: http://marketing.web.att.com/oil/data/access/ncls/ContentIndex.htm

BCPA URL: http://marketing.web.att.com/oil/data/access/bcpa/ContentIndex.htm

3.3.5.6. Alarm Unit Installation

Work relating to power, discrete alarm wiring to the monitored equipment, or alarm verification with TMAS Database Group for installation of Alarm systems (i.e., DMACS or NJ508) must be performed per the Network Events Guidelines (see section 4).

All other activities associated with the installation of Alarm systems can be performed anytime.

1. New equipment installations requiring connection to the alarm system will follow alarm unit installation guidelines.

3.3.5.7. Notice Regarding Power/Technology SMOP Transmission/ Concurrence

For the purpose of power-related SMOP review and concurrence, the following instructions indicate the appropriate TSG involvement.

All SMOPs written to cover work activities performed physically in a BDFB, PBD, or any other PDE (Power Distribution Equipment), whether line-side or equipment-side will be reviewed by the Power TSG/SME.

> **NOTE:**
> **Although not required, a separate SMOP for the Power portion of a job is acceptable and preferable.**

3.3.6. Infrastructure

The guidelines in this section apply to the following infrastructure elements:

• Building Mechanical Systems/HVAC

• Building Electrical Systems

- AC Emergency Power Systems

- Building Structure

- Environmental

- Building Security/Systems

- Building Fire Detection/Alarm Systems

- General Building Construction

3.3.6.1. General Guidelines

1. Infrastructure equipment in direct or indirect support of operating network equipment, switching, and/or transport will be given the same urgency consideration as power. Any planned maintenance, construction, and/or removal activity that may negatively affect the Network must be performed between the hours of midnight and 6:00 a.m. local time, seven days a week.

2. When performing any work activity on building equipment, consideration must be given to that equipment and its interrelationship with other components within that system and other systems.

3. Understand system configuration and operation, with relationship to safety and service provided. Drawings, specifications, and manuals are critical and must be available and referenced, as necessary, prior to the start of any work activity. A physical inspection of the systems and work area must be made to confirm the accuracy of the documentation on-hand.

4. Prior to the start of any work activity, an accurate assessment of all required tools and supplies must be made to ensure that the activity will be satisfactorily completed.

5. After internal resources have been identified, an assessment of other available resources should be made to determine the potential need and availability of supplemental resources. Consideration should be given to resources for support of a back-out plan.

6. Some building work activities may have environmental implications. Therefore, an understanding of all levels of environmental requirements is essential. For assistance in understanding environmental requirements and a list of available resources, refer to section 5 (Environment, Health, and Safety) of this handbook.

7. Other building work activities, such as construction, could affect the Network. An assessment and mitigation of the potential risks must be made prior to any such activity.

8. NFS will provide support for the appropriate scheduling of all building infrastructure activities. The oversight of activities <u>may</u> be provided by Building Engineering personnel or a designated representative.

3.3.7. Support Systems

3.3.7.1. NEMOS

System Process for all planned NEMOS Procedures

The following will be the process for any future NEMOS operating system releases and T-fixes. Application releases are managed under a different set of procedures by the Systems Planning district.

1. Busy days and major customer visits are avoided if at all possible

2. A Network Event will be established

3. A negotiated timeframe will be established between work centers so they are made aware of any work (NTP Canada, GNOC)

4. Columbus is made aware of any work to be done so they are available if there are any problems

5. A conference bridge is set up

6. All system procedures will be completed prior to 6:30 am Eastern time

7. Shift Managers are kept informed from inception to completion and have the authority to cancel the work if they feel the time is not right.

8. Install and Back out procedures are documented and in place prior to work being completed

9. All involved in system work should abide by the Ask Yourself process, including stop-resolve-resume instances

Table 3-1. Network Time Conversion

DAYLIGHT SAVINGS TIME							STANDARD TIME						
Network Time	Hawaii HDT	Alaska AKDT	Pacific PDT	Mountain MDT	Central CDT	Eastern EDT	Network Time	Hawaii HST	Alaska AKST	Pacific PST	Mountain MST	Central CST	Eastern EST
23:00	19:00	21:00	22:00	23:00	00:00	01:00	23:00	19:00	20:00	21:00	22:00	23:00	00:00
00:00	20:00	22:00	23:00	00:00	01:00	02:00	00:00	20:00	21:00	22:00	23:00	00:00	01:00
01:00	21:00	23:00	00:00	01:00	02:00	03:00	01:00	21:00	22:00	23:00	00:00	01:00	02:00
02:00	22:00	00:00	01:00	02:00	03:00	04:00	02:00	22:00	23:00	00:00	01:00	02:00	03:00
03:00	23:00	01:00	02:00	03:00	04:00	05:00	03:00	23:00	00:00	01:00	02:00	03:00	04:00
04:00	00:00	02:00	03:00	04:00	05:00	06:00	04:00	00:00	01:00	02:00	03:00	04:00	05:00
05:00	01:00	03:00	04:00	05:00	06:00	07:00	05:00	01:00	02:00	03:00	04:00	05:00	06:00
06:00	02:00	04:00	05:00	06:00	07:00	08:00	06:00	02:00	03:00	04:00	05:00	06:00	07:00
07:00	03:00	05:00	06:00	07:00	08:00	09:00	07:00	03:00	04:00	05:00	06:00	07:00	08:00
08:00	04:00	06:00	07:00	08:00	09:00	10:00	08:00	04:00	05:00	06:00	07:00	08:00	09:00
09:00	05:00	07:00	08:00	09:00	10:00	11:00	09:00	05:00	06:00	07:00	08:00	09:00	10:00
10:00	06:00	08:00	09:00	10:00	11:00	12:00	10:00	06:00	07:00	08:00	09:00	10:00	11:00
11:00	07:00	09:00	10:00	11:00	12:00	13:00	11:00	07:00	08:00	09:00	10:00	11:00	12:00
12:00	08:00	10:00	11:00	12:00	13:00	14:00	12:00	08:00	09:00	10:00	11:00	12:00	13:00
13:00	09:00	11:00	12:00	13:00	14:00	15:00	13:00	09:00	10:00	11:00	12:00	13:00	14:00
14:00	10:00	12:00	13:00	14:00	15:00	16:00	14:00	10:00	11:00	12:00	13:00	14:00	15:00
15:00	11:00	13:00	14:00	15:00	16:00	17:00	15:00	11:00	12:00	13:00	14:00	15:00	16:00
16:00	12:00	14:00	15:00	16:00	17:00	18:00	16:00	12:00	13:00	14:00	15:00	16:00	17:00
17:00	13:00	15:00	16:00	17:00	18:00	19:00	17:00	13:00	14:00	15:00	16:00	17:00	18:00
18:00	14:00	16:00	17:00	18:00	19:00	20:00	18:00	14:00	15:00	16:00	17:00	18:00	19:00
19:00	15:00	17:00	18:00	19:00	20:00	21:00	19:00	15:00	16:00	17:00	18:00	19:00	20:00
20:00	16:00	18:00	19:00	20:00	21:00	22:00	20:00	16:00	17:00	18:00	19:00	20:00	21:00
21:00	17:00	19:00	20:00	21:00	22:00	23:00	21:00	17:00	18:00	19:00	20:00	21:00	22:00
22:00	18:00	20:00	21:00	22:00	23:00	00:00	22:00	18:00	19:00	20:00	21:00	22:00	23:00

4. Network Events Guidelines

4.1. Introduction

This section, together with Section 3, Work Schedule Guidelines, provides supporting information for several of the Ask Yourself questions introduced in Section 1, Service Protection:

- *Question 2: Do I know why I am doing this work?*

- *Question 3: Have I identified and notified everybody - customers and internal groups- who will be directly affected by this work?*

- *Question 5: Is it the right time to do the work?*

- *Question 10: Have I made sure the procedure includes proper closure including obtaining clearance and release for the appropriate work centers?*

The Network Events Guidelines provided in this section indicate the appropriate times for performing a variety of work activities. They also provide direction for the process of reporting and approving work activity that affects AT&T customer service.

The process for reporting and concurring with work activity described in this section is intended to:

1. Effect an initial level of oversight (in the NRC) for network activity based on the Work Schedule Guidelines

2. Provide the data required for the overall Global Network Operations Center (GNOC) Network Events Review Process & Restriction Process.

3. Promote horizontal sharing of information across the country to ensure that all who need to know are aware and to promote prevention-oriented learning.

The first section of these guidelines describes the basic process for Network Event reporting and approval. The process was developed with the intent of driving maximum uniformity across the requirements for Network Event reporting as they apply to the various technology groups. A set of matrices is included to assist in determining whether a report is required for planned work and also summarizes the out-of-hours requirements specified in the Work Schedule Guidelines. Also, the matrices have been revised to reflect newly determined monitoring requirements by AT&T for network equipment installation and building infrastructure work. These requirements are shown as Red, Yellow or Green steps, depending on their criticality.

4.2. Network Events Process

ABNORMAL/HAZARDOUS CONDITION REPORTING: The presence of a hazardous/abnormal condition may have an impact on previously approved Network Events. Therefore, requirements for hazardous condition reporting are included in these guidelines.

4.2.1. Purpose

The Network Event process was designed to help achieve our goals of striving for flawless network service and loyal customers. Through this process we can:

• Prevent problems before they occur

• Do the right thing at the right time, instead of just doing anything to get the job done

• Question the way things are done and suggest improvements.

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4.2.2. Definitions

- **AT&T One Ticket System (AOTS) -** AOTS Change Management provides a means to enter planned work and ensure the technical content of the work is correct as well as running conflict id on the work. AOTS also provides the means for customer notification for several Domestic Technologies.

- **Network Events** - A network event is defined as any planned work that has the potential to interrupt or degrade AT&T Customer service. Network Event activities are described, by technology in the Ask Yourself Handbook. If a network event is required then an entry must be submitted in the appropriate change management tool.

- **Planned Maintenance**-- Hardware and software upgrades and other maintenance work known and planned in advance. These require the work to be completed using a standard, tested method of procedure. This work must be reviewed using the Matrices in Section 4.4 to determine the appropriate time for the work.

  - ° **Planned Maintenance processes for Corporate Real-Estate** can be found at; https://spsf05.web.att.com/cre/Employees/MOP%20Document%20Library/MOP.aspx

- **Unplanned Maintenance**-Service is disrupted or in imminent danger of disruption. Customers are effected A MOP is required but work may go ahead without entering a Network Event (CHANGE RECORD/SMOP) according to Section 4.2.11.1 Please review the table below for more specifics.

Unplanned vs. Planned Maintenance Guidelines

- **Planned Maintenance** - Hardware and software upgrades and other maintenance work known and planned in advance. These require the work to be completed using a standard, tested method of procedure. This work must be reviewed using the Matrices below to determine the appropriate time for the work.

- **Unplanned Maintenance -** Service is disrupted or in imminent danger of disruption. Customers are affected. A MOP is required but work may go ahead according to the table below.

MOP and CHANGE RECORD/SMOP Guidelines				
Type	**Classification**	**MOP Requirement**	**Requires SNEM Network Event**	**Examples**
Fault Management	Unplanned - Emergency Maintenance (any network condition which is currently negatively impacting	Tier 2 - technically accurate written work instructions	N	Any condition in which customers are out of service or are experiencing perform-

MOP and CHANGE RECORD/SMOP Guidelines				
Type	**Classification**	**MOP Requirement**	**Requires SNEM Network Event**	**Examples**
	customer availability or performance)			ance issues such as excessive latency or packet loss.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) Low or Medium Risk/ Impact	Tier 2 - technically accurate written work instructions	N	Correcting simplex conditions (redundant processor cards, power supplies), chronic network components, and normalizing workarounds.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) - High Risk & High Impact	Tier 3 or 4 approved formal MOP	Y	Correcting major network anomalies (i.e. chassis swaps, software upgrades to resolve critical bugs/vulnerabilities, and network architecture changes)
Change Management	Planned- Expedited Software/Hardware Upgrades	Tier 3 or 4 approved formal MOP	Y	Critical capacity augments to resolve projected performance issues and/or enable customer revenue streams.
	Planned- BAU Software/ Hardware Upgrades	Tier 3 or 4 approved formal MOP	Y	All other planned changes.

* Next available window means the first window in which the right procedure, parts, and people are available to correct the condition.

- **S**ervice **M**ethod **O**f **Procedure(SMOP)** - A service method of procedure is a detailed document which describes a work methodology to line personnel who perform activity in GNFO Legacy T controlled locations.

- **Service Method of Procedure/Network Event Mechanism (S/NEM) -** The S/NEM System provides an automated method for the GNFO/Supplier to create, submit for approval, retrieve, print, and store the SMOP forms. This is a Legacy T tool.

    SNEM users can query activities, pull various reports such as Network Events by GNFO District, locations (CLLI), technology, date, etc. For additional information about SNEM, contact Ruth Gauweiler @ 908-234-6776

- **Risk Factors** (1-5) - Risk Factors are assigned by SMEs- Risk Factor 5 is the highest risk and 1 is the lowest risk. 5 is the default. 0=none 1=low 2=some 3=average 4=high 5=extreme

- **Steps:**

- **RED**= Activity includes (RED) steps that require GNFO coverage in the CO while the installation work is performed, possibly with no direct oversight. Some RED activities require work tasks by GNFO, which are defined in the CHANGE RECORD/SMOP. RED steps require center notification. Scheduling of Red Step activities must be coordinated with the GNFO by the supplier.

- **YELLOW**= Activity includes (YELLOW) steps that require the Control Center is notified prior to the start of the step Yellow steps pose a higher risk to the network than Green Steps, and may require direct involvement from the responsible Network Control Center. Direct Control Center involvement must be addressed in the CHANGE RECORD/SMOP. GNFO presence is not required in the Office during the execution of Yellow Steps.

- **GREEN**= Requires Control Center awareness while the installation work is performed. GNFO presence is not required in the Office during the execution of Green Steps.

  Control Center = The responsible network maintenance module

- **IMPACT (Impact to the Network) High, Medium and Low.** Impact is assigned by the preparer. High is the default risk factor in SNEM. Potential customer impact (high, medium, low) considers the number of T3s affected, T3 restorability, and the number of blocked calls if a process failure was to occur during the implementation of the work activity. The matrix below can be used to assess the potential customer impact.

	T3 Count	% Restorable	Blocked Calls
High	>100	<25%	>20k
Medium	40←--→100	25% to 75%	1k←--→20k
Low	<40	75% to 100%	<1k

Not all activities can be categorized by the above matrix.

4.2.3. Network Event Steps

GNFO/Supplier receives order

GNFO/Supplier consults Ask Yourself Manual

GNFO/Supplier creates SMOP/ Change Record in the Change Management Tool.

Change Management Tool checks for conflicts

Change Management Tool sends Change Record/ SMOP to SME

SME reviews

Change Management Tool replies to GNFO/Supplier

4.2.4. Process and Route Change Record/SMOP/NE Request to SME

Using the Work Schedule Guidelines and the matrices included in section 4.4, determine when the activity can be performed, then create and submit the CHANGE RECORD/SMOP no later than 72 hours prior to the start of work, excluding Saturday, Sunday and major holidays (for example: Christmas, New Years Day, Labor Day, 4 of July, Memorial Day and Thanksgiving Day.)

The Change Record/ SMOP will then be reviewed by the appropriate Subject Matter Expert (SME). If the SME has been involved with the development of the Change Record/SMOP, the concurrence process can be expedited by noting the SME personnel involved.

The originator of the SMOP and the SME reviewer should never be the same single person or from the same work group.

NOTES:

1. For Undersea Cable and Earth Station Network Event requirements refer to Section 9, for Mow Data refer to Section 11, for Web Hosting Infrastructure refer to Section 10.

2. There is a plan for the entire network organization to migrate to AOTS to manage all planned changes. As of April 2008 this has not been accomplished. Until this move to AOTS occurs, each Legacy company should use its Legacy Change Management Tool for entering a planned event. However all Legacy Companies must now abide by the times and monitoring guidelines set out in Ask Yourself. They must also have a documented MOP reviewed and approved by a SME prior to performing any work on the network.

4.2.5. Review/Concur Change Record/SMOP

The SME will review the Change Record/SMOP for technical accuracy and determine if the work can proceed. This activity may require the SME to contact the originator to discuss the work and possibly make changes to the Change Record/ SMOP or the time/date when the work is planned. In addition, the risk involved with the work may require that the SME walk through with the originator.

4.2.6. SME Responsibilities with regard to reviewing Change Record/ SMOPs

Act on reviewing submitted Change Record/SMOPs in a timely fashion (72 hours), giving due respect to the installation time line the Suppliers are committed to adhering.

Review Change Record/SMOP for technical content ONLY. Technical content would be defined as the Step-by-Step MOP information the preparer has created. SME is also responsible for the correctness of any Seed document numbers and

issue dates mentioned in the Change Record/SMOP. **Any information such as Order number or other information the Change Record/SMOP preparer has transferred from the TEO to the Change Record /SMOP is not defined as technical content**. SMEs will not be held accountable for transcription errors created by the Change Record/SMOP preparer. Risk Factors are defined in Chapter 2 of Ask Yourself, Section 2.5.2.4.

4.2.7. Perform Conflict Resolution

Currently, Legacy T uses the SNEM System to manage planned changes. All networks (legacy T, Legacy B; Legacy S, Mobility) will be migrating to AOTS to manage planned changes. Once this migration to AOTS occurs, AOTS will perform conflict resolution for all events in all the Legacy Networks.

The AOTS/SNEM Systems is used to correlate Network Event activities. AOTS/ SNEM is a real-time databases system, which is used network wide to document all domestic Network Event activities. Using potential customer impact, risk factor, geographic location, technology and dates, the proposed work activity is compared to other scheduled activities.

A proposed work activity involving a critical element shall not be scheduled concurrently with an activity involving another critical element within the same geographic area. A new date shall be negotiated. For example, a 4E generic upgrade requiring a boot (risk factor=4) should not be scheduled concurrently with major power work feeding that 4E (risk factor=5).

4.2.8. Obtain Network Event Number

The AOTS/ SNEM system will assign a Network Event number to the work activity and send notification to the originator. At the time the work is to be performed, notification must be given to the appropriate NRC surveillance group for the equipment affected (see Section 1 for telephone numbers). When the activity is complete the originator shall close the event with concurrence from the controlling center.

Should an activity require additional time beyond the current Network Event End Date, the originator may extend the event by accessing AOTS/SNEM and following date change procedures. The life of a Network Event shall be a maximum of 90 days. Any activity extended past 90 days will require the re-submission of a Change Record /SMOP and the issue of a new Network Event.

4.2.9. GNOC Network Events Oversight

Network Event data is submitted to the GNOC in order to allow oversight across the entire AT&T Network. The ultimate status of any event is dependent upon this GNOC oversight.

4.2.10. Waivers to Network Events Approval Guidelines

The Network Events Process is designed to provide oversight of network activity with the goal of minimizing risk to AT&T customer service. However, it has been recognized that circumstances may require exceptions to the Change Record/

SMOP concurrence process previously outlined. These exceptions, along with the conditions for waivers of process requirement are as follows:

4.2.10.1. Immediate Maintenance Emergencies or Unplanned Maintenance

Maintenance can be categorized as Planned or Unplanned according to the definitions in section 4.2.2.

Where service has been disrupted or disruption is imminent and customers are impacted, repair/restoration procedures may proceed without adherence to the formal SMOP/Network Events Process, as directed by the appropriate NRC maintenance group. However, the parties involved with the emergency procedure should have a plan that incorporates the considerations addressed in the formal SMOP/Network Events Process. This would be considered Unplanned Maintenance.

When service has been degraded and there is no customer impact then the work should be completed in the next appropriate maintenance window using technically accurate written work instructions and coordinated through the center. This work would fall into the category of Planned Maintenance.

4.2.10.2. Expedited Change Record/SMOP Approval

For high priority work, which is identified and scheduled in a shorter time period than the 72-hour submittal process, the appropriate SME and GNFO supervisor or empowered person must concur on the need for a variance. If the expedited Change Record /SMOP approval is not granted, a new date for the Network Event will be negotiated between the GNFO Work Force and the NRC

4.2.10.3. Exception Process

•   The GNOC Change Management Team controls the Network Exception Process. Please review this process at
        AT&T Global Network Operations Center

4.3. Network Event Reporting and Contact Information

4.3.1. Extraordinary Event Process (E2P)

The primary purpose of the Extraordinary Event Process (E2P) and Communication is to allow us to consider these extraordinary network events in relation to any planned events or other unplanned events that are going on to consider

any impact on a network wide basis. It will allow us to engage our leadership and other required parties including Public Relations, Security Leadership, Sales Communications, etc. in a more timely and focused manner.

Examples of "Extraordinary" Network Events that must be reported.

- Damage to AT&T network buildings or infrastructure.

- Any security breaches break ins, or vandalism to AT&T network buildings.

- EH&S incidents.

- Weather impact to operations.

- Any thing that in your professional judgment that the GNOC should be aware of.

The E2P process will be triggered when an event (e.g. tornado, flood, black out) has the potential to impact a network building or finite geographical area where multiple network elements are or could be involved. This could range from a single central office (e.g. BOD) to a city, state, or region.

There will be a 2 tiered approach for reporting these events:

1. The Process for network to report Events described above is as follows:

   - Call the GNOC Shift Manager at 866-466-2288 Prompt #9 and report any of the above issues. These issues will be evaluated and acted upon as appropriate.

2. There will be a separate surveillance and reporting process for gathering network impact data and reporting it to and from the EOCs and Network Leadership if applicable.

Once a report has been received by the GNOC or the NRCs notice significant network impact, there are 2 ways to activate the E2P Process:

1. GNOC will determine when to kick off the event reporting based on significant impact to the network.

   - When the GNOC kicks off the E2P Process they will notify the Event Management NRC to begin collecting data.

2. The NRC Event Management Center will kick off the event based on impact to the network.

- When the Event Management NRC begins the process they will notify the GNOC Shift Manager that they have started recording data for an event.

Once the E2P Process is activated:

- The Event Management NRC will survey the network, to manage events impacting multiple network elements in a building or geographic area where coordination among NRCs is necessary and critical to maintaining/restoring service.

- The Event Management NRC will compile the required information. This information will be found at the following web sitehttp://gla.geolink.att.com

- There will be 3 types of reports which will be complied:

  A.   Steady State: no network impact, no extraordinary event- report sent daily via GNOC.

  B.   Extraordinary Event - (without network impact) extraordinary event (flooding, ice storm, etc) but no network impact - GNOC send email twice daily.

  C.   Extraordinary Event - (with network impact) GNOC will send a status email 1 hour after the first impact to the network and every 4 hours thereafter.

- The Event Management NRC will provide the data to the GNOC and the GNOC will then distribute the data in a replicable format to the EOCs and the Network Leadership Teams via email as outlined above.

4.3.2. Notice Regarding Power and Technology Change Record/SMOP Review and Concurrence

For the purpose of power-related Change Record/SMOP review and concurrence, the following instructions indicate the appropriate SME involvement. In either of the following cases, only one Change Record/SMOP must be prepared.

A.   For work on the technology 'equipment side' of the BDFB -up to and including the connection of technology equipment to the BDFB- the appropriate technology SME will review and concur with the Change Record/SMOP. For example, the DACS/MUX SME would review and concur with Change Record /SMOPs which involve the connection of a new DDM1000 bay to the BDFB; also, the 5ESS SME would review and concur with Change Record/SMOPs which involve the connection of 5ESS equipment to the BDFB. **Important:** Power Seed Document must be referenced and used.

B.   For work on the 'power plant side' of the BDFB-including main feeder BUS connections-the Power SME will review and concur with the Change Record/SMOP.

4.3.3. Transport (not Including Outside Plant and Power)

Originators of Change Record/SMOP work requests on Transport Equipment will typically be the personnel who will be performing the work. However, SME groups may act as the agent in filing the Change Record/SMOP.

4.3.4. Power

The following are specific Network Events requirements pertaining to Power:

A.   Network Event reports are NOT required for full load engine tests at non-critical locations, but must be requested verbally at the time of log-in at the location.

B.   AC or DC Document equipment routines and recurring maintenance processes which require hands-on manipulation of equipment require one of the following:

1.   AT&T Equipment Maintenance Practice

2.   A Seed Document or an authorized temporary equipment maintenance practice prepared for use by GNTS personnel pending issuance of an official AT&T 9-digit Practice

3.   Manufacturer's product manual. The manual must provide step by step procedures. If the manual does not provide step by step procedures, a Detailed Method of Procedure (Change Record/SMOP), as covered in option 4, must be prepared and approved

4.   A Detailed Method of Procedure (Change Record/SMOP) approved by SME. A Network Event may also be required, as specified in the Network Event Guidelines Matrix.

C.   All equipment Operation and Maintenance procedures covered by an AT&T Practice can be performed with the practice serving as the Change Record/SMOP. All discrepancies in AC or DC practices should be reported to:

Manager

Power and Infrastructure Documentation

800-874-4545 Prompt 2

http://nets.web.att.com/technologies/power/power.asp

NOTE:

Any potential service-affecting errors or omissions found in practices should be reported to the NRC Power Module immediately for resolution.

4.3.5. Outside Plant- Legacy T Core Fiber

The Cable Network Management Center (CNMC) group in the NRC-Conyers is the national single point of contact for the GNFO and Outside Plant Engineering and Constructions (OSPEC). All Outside Plant Change Record/SMOPs will be concurred on by the CNMC. The CNMC and the OSP-SME will assist the GNFO in the development of MOPs and Change Record/SMOPs for all Outside Plant activities.

4.3.6. Switching and Signaling

Specific Switching/Signaling Requirements:

•   All activity in any technology surveyed by the NRC requires prior notification.

•   All Change Record/SMOPs will be written either by the GNFO, the Supplier or the SME or any combination of the three, as appropriate.

4.4. Network Event Criteria

The following information is intended to assist in the determination of whether work activity qualifies as a Network Event. This information is a summary of the Work Schedule Guidelines in an easily referenced tabular format. All matrices are intended to be a basic guideline. It is difficult to simply categorize the complex and varied work activities that occur in the AT&T Network. If you have any questions, or are unsure about the guidelines, contact the SME for your technology (see the GNOC web site or Infoswap) . For many EF&I and Building Management activities, Installation Monitoring Requirements denoting Red, Yellow or Green steps have been added to the tables.

Earth Stations, International Gate way Switches: For equipment carrying 60% or more International Service, the following requirements for work hours may not apply. The actual hours approved for this work will be negotiated with the Global Network Operations Center International Network Management (908-234-6750), based upon the world time zones impacted. For additional information on International Network Event Criteria, refer to Section 9.

4.4.1. Transport and Outside Plant

Domestic:

A.   The following matrices summarize the work schedule guidelines requirement for out-of-hours work. Generally, those work activities which can be performed during normal business hours (not designated on the following matrices to be performed between the hours of 6 p.m. to 6 a.m. or on weekends) will not qualify as a Network Event.

      All times are local unless otherwise noted.

B.   The WEEKEND maintenance window is defined as a continuous maintenance session starting at 6 p.m. Friday and concluding at 6 a.m. Monday.

C.   Work activities designated to be performed on weekends *and* 6 p.m. to 6 a.m. may be performed during the weekend maintenance as defined in 'b' above *or* during the Monday through Thursday 6 p.m. to 6 a.m. time period.

Domestic & MoW:

A.   Any Planned Transport Activity which has CBB Customer Impact must be agreed upon between CBB & Transport in advance. If it is emergency work to correct a fault situation and it will isolate a customer CBB & Transport must agree to the specific time frames and notifications.

4.4.1.1. Network Events Matrix - General Activities

NOTES:

1.   General Activities exclude DACS III, DACS IV, Power, 5ESS and Lightguide related work. See specific section for time requirements.

2.   Throughout all the Network Event Matrices, Risk Factor is one of the following ratings:

      0=none 1=low 2=some 3=average 4=high 5=extreme

3.   Rules for monitoring **Installation** steps or performing **Maintenance** activities. The matrix also indicates when maintenance can be done.

Early notification is the key to everyone's success.

Table 4-1 General Activities

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Week-ends	6 p.m. to 6 a.m.	12 a.m. to 6 a.m.	Installation Monitoring Require-ment
Repair of Equipment that has Interrupted Service		No	X				N/A
Repair of Equipment that is in Service degrad-ing condition		No	X				N/A
Repair of equipment that is necessary to provide service (order wires, sur-veillance equipment, OSS)		No	X				N/A
Any planned activity impacting the 911 Net-work	4	Yes				X	YELLOW
Routines, when no serv-ice jeopardy exists		No	X				
Installation of new equipment when no con-tact with working equip-ment exists		No	X				GREEN
Removal of equipment where risk to working equipment exists	3	Yes		X	X		YELLOW
C.O. common equip-ment activity. Including but not limited to:							
• Timing Supply	3	Yes			X		YELLOW
• Sync. Supply	3	Yes		X	X		
	3	Yes			X		

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Week-ends	6 p.m. to 6 a.m.	12 a.m. to 6 a.m.	Installation Monitoring Require-ment
• Freq. Supply							
Cable mining with working service in the same cable rack and/or in cable racks over working equipment	5	Yes				X	YELLOW
Cable mining where no service is in the same cable rack and/or not in racks over working equipment	1	Yes	X				YELLOW
Installing ironwork and cable rack above work-ing equipment	3	Yes		X	X		YELLOW
Running new Cable over physically protected working equipment	3	Yes		X	X		YELLOW
DSX-3 • Install-Remove • Battery for DSX-3	3 Note 1	Yes		X	X		YELLOW
Database recovery from a previous backup on a working DCS system	2	NO		X	X		RED
Water Tanks							
Any construction, re-pair, or any other activi-ty other than visual in-spection of water stor-age systems/tanks that are installed in network buildings	5	Yes				X	YELLOW

Note 1. Refer to the Power Activity Matrix

4.4.1.2. Network Events Matrix - Outside Plant Activities

This matrix is intended to be a basic guideline. Each individual Outside Plant activity has many variables. These variables make it difficult to simply categorize each Outside Plant process and dictate network event requirements. For example, work in connection with bonding and grounding or planned rearrangements of a cable may or may not require a Network Event. Also, time of day guidelines may be a factor because of personal safety concerns. If you have any questions in regard to MOP's and Network Event Guidelines, please contact the CNMC or your Outside Plant Fiber SME.

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing **Maintenance** activities. Please note that activities are split between Core and Metro fiber. The Metro fiber requires a 12 hour window due to high fiber count cables and congestion in splice enclosures.

Table 4-2 Outside Plant Activities

Planned Activity	Core & Metro Risk Factor	Core & Metro N.E. Report Req'd	Core & Metro No TIME Restriction	Core & Metro Week-ends	Core 9 p.m. to 6 a.m. E.T.	Core 12 a.m. to 6 a.m. Local Time	Metro 6 p.m. to 6 a.m. Local Time	Core & Metro Installation Monitoring Requirement
Planned Cable Intrusions (cable reroutes/cutovers PCI) with CBB traffic:	5	Yes						Red
• **Work on fibers w/ CBB** traffic (prep work can begin at 9 pm Local time but actual work on CBB fibers can not happen until at least Midnight Local Time)				X		X		
				X	X			

Planned Activity	Core & Metro — Risk Factor	Core & Metro — N.E. Report Req'd	Core & Metro — No TIME Restriction	Core & Metro — Week-ends	Core — 9 p.m. to 6 a.m. E.T.	Core — 12 a.m. to 6 a.m. Local Time	Metro — 6 p.m. to 6 a.m. Local Time	Core & Metro — Installation Monitoring Requirement
• **Work on fibers with no CBB** traffic								
Planned Cable Intrusions (cable re-routes/cutovers PCI) with no CBB traffic	5	Yes		X	X		X	Red
Repair of fibers that are not in service.	3	Yes	X					Yellow
Inspection of 2400/ UCA3-6 closures	1	No	X					Yellow
Installation of 2400/UCA3-6 closures: • If route is 100% restorable	2	Yes	X					Yellow
• If route is not 100% restorable	4	Yes		X	X			Yellow
Inspection of UCB1 used as a isolation closure	1	No	X					Yellow
Lightguide Cable and Tone Wire installation and removal in common conduit systems, same innerduct	Variable call the CNMC	Yes	X					Yellow

Planned Activity	Core & Metro Risk Factor	Core & Metro N.E. Report Req'd	Core & Metro No TIME Restriction	Core & Metro Week-ends	Core 9 p.m. to 6 a.m. E.T.	Core 12 a.m. to 6 a.m. Local Time	Metro 6 p.m. to 6 a.m. Local Time	Core & Metro Installation Monitoring Requirement
Testing of working fibers, and fiber rolls	3	Yes		X	X		X	Red
Cable Locator Power Plant Connections	5	Yes				X		Red
Planned Rearrangements of cable, conduit and manholes (no sheath entry)	1	No but call CNMC	X					Yellow
Testing spare fibers in interconnect cabinets. (LSCIE, LSCIT, LGX)	1	No but call CNMC	X					Yellow
Testing spare fibers that are not in interconnect cabinets	1	No	X					Green
Bonding and Grounding Activity. No sheath entry and UCB1 end cap removal only	1	No but call CNMC	X					Yellow
LGX and Pre-terminated Cable installation over or adjacent to working equipment	1	Yes	X					Yellow
Cleaning connectors on in-ser vice equipment	3	Yes		X	X		X	Red
Concrete Removal	2	No, but call the CNMC	X					Yellow

4.4.1.3. Network Events Matrix Fiber Optic Transport Equipment/CNI Equipment/ Planned New Installations and Adding Lines/Provisioning Activities.

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing **Maintenance** activities.

Refer to the specific MOP, SIP, or MIP for time and CHANGE RECORD/SMOP requirements.

Contact the owner/author for clarifications or questions.

Additional Lightwave documents and helpful information can be found on the Lightwave TIPs website: http:// nets.web.att.com/technologies/lightwave /

Table 4-3 Fiber Optic Transport Equipment/CNI Equipment/New Installations/Adding Lines/Provisioning and Miscellaneous and Maintenance Activities

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	N.E. Req'd	Time Restriction	12 a.m. to 6 a.m. local switch time	Week ends 10 p.m. Friday to 6 a.m. Monday	10 p.m. to 6 a.m. Monday-Friday	Installation Monitoring Require-ment
Activity: New In-stallations							
• No Connec-tions to In Service Equipment	1	No	No (Note 1)				YELLOW
• Adding DS3/)OC3/ OC12/ OC48/ OC192/ OC768 Cabling to in svc equip-ment	2	No	No (Note 1)				YELLOW

Planned Activity	Risk Factor	N.E. Req'd	Time Restriction	12 a.m. to 6 a.m. local switch time	Week ends 10 p.m. Friday to 6 a.m. Monday	10 p.m. to 6 a.m. Monday-Friday	Installation Monitoring Require-ment
• Disconnect-ing DS3/)OC3/ OC12/ OC48/ OC192/ OC768 Cabling to in svc equip-ment	3	Yes	No				YELLOW
• Mounting Shelves	1	Yes	No				GREEN
Laying Cable in racks over in serv-ice equipment or ca-bles	1	Yes	No				YELLOW
Removal of cable over in service equipment or from racks containing in service cables-	5	Yes	Yes	X			RED
CNI Miscellaneous		Yes	Yes			X	
Planned Provision-ing Activities						(See Note 2)	
Termination of Power Connections	5	Yes	Yes			X	RED
Termination of Synchronization Links	5	Yes	Yes			X	RED
Software Upgrades	3	Yes	Yes	X		X (See Note 3)	YELLOW
Slotting of Cards for Provisioning Activity	1	No	No				N/A
Any planned main-tenance activity that	Varies	Varies					YELLOW

Planned Activity	Risk Factor	N.E. Req'd	Time Restriction	12 a.m. to 6 a.m. local switch time	Week ends 10 p.m. Friday to 6 a.m. Monday	10 p.m. to 6 a.m. Monday-Friday	Installation Monitoring Require-ment
will impact custom-er service.	(Note 4)	(Note 4)					
Product Change Notices	Varies (Note 4)	Varies (Note 4)					YELLOW

NOTES:

1.   Any item with no time restrictions must have protection line available for switching. If no protection available the NRC must determine.

2.   Examples of Planned Provisioning Miscellaneous include but are not limited to: e.g. OC-X rolls, subnet reconfigu-rations, etc. Time restrictions and risk assessment will be determined by the ONM organization after evaluation of the activity.

3.   Remote downloading is permissible any time but activation must occur during the maintenance window.

4.   These activities will be controlled by the Control Center. Must contact control center prior to work.

4.4.1.4. Network Events Matrix - DACS 1/II/CEF

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4 - 4 DACS 1/II/CEF

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Planned Activity	Risk Factor	NE Req'd	No Time restrictions	6 p.m. to 6 a.m.	Notes	Installation Monitoring Requirements
DACSII, CEF Install New Frames	1	No	Depends on proximity to live equipment		1	GREEN
DACS II CEF Bay Augments	5	Yes		X	2	YELLOW
DACSII CEF Cable Augments	4	Yes		X	3	GREEN
Modifying Software	4	Yes		X		YELLOW
Modifying Hardware	4	Yes		X	4	YELLOW
Maintenance Activity for DACS 1/II/CEF	Various	No				Controlled by Center
NPC Provisioning for DACS 1/II/CEF	3	No	See note		GRTH/ DGRTH Commands can be done anytime	Do not plug in or pull out an NPC card without calling the Center
Removal of DACS 1/II/CEF frames	3	Yes	Depends on proximity to live equipment		Does not include POWER or Cable mining. See those specific tables	5

NOTES:

1. POWER & Cable runs subject to POWER & DACS/MUX matrix

2. Presently AT&T SME required to be on-site

3. Plug in equipment only at direction of AT&T SME Unit growth/

4. Degrowth for common /control units

5. You must verify with the Field or the CENTER that service has been removed.

4.4.1.5. Network Events Matrix - Miscellaneous DCO - DS1

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-5 Miscellaneous DCO - DS1

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Miscellaneous DCO equipment - DS 1 activities

Planned Activity	Risk Factor	NE Req'd	No Time restrictions	6 p.m. to 6 a.m.	Notes	Installation Monitoring Requirements
NCOE Install-Re-move	2	Yes	New bays with no risk to other equipment	If risk to adjacent equipment	POWER & Cable runs subject to POWER & DACS/MUX matrix	GREEN
NCOE add shelves	3	Yes				YELLOW
USEC Install-Re-move	3	Yes	X		POWER & Cable runs subject to POWER & DACS/MUX matrix	GREEN
USEC CN/MIP	3	Yes	X			GREEN
DSX-1 Install-Re-move	3	Yes	X		See POWER MA-TRIX for battery	GREEN
DSX-1 Provisioning	3	No	X			N/A

NOTE:
Any Activity, regardless of time of day (or night) is subject to the discretion of the available technical support supervisor in the NRC for approval or disapproval.

4.4.1.6. Network Events Matrix - DACS/MUX

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing **Maintenance** activities.

Table 4-6 DACS/MUX

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.**

Planned Activity (Note 1)	Risk Factor	NE Req'd	No TIME Restriction	Week-ends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
All work involving the primary MC, Centerstage Switch, or Disk/Tape Drives	4	Yes		X	X		RED
All work involving the secondary MC, Centerstage Switch, or Disk/Tape Drives	1	No	X				N/A
All work involving backplane	4	Yes		X		X	RED
Running new Cable over physically protected working equipment	3	Yes		X	X		YELLOW
All additions of cabling	3	Yes			X		YELLOW
Expansion of I.O. bays, including acceptance tests	4	Yes		X	X		RED
Single DS3 work in the backplane of an in-service bay	1	Yes		X	X		N/A
DSX-3	3	Yes		X	X		YELLOW

Planned Activity (Note 1)	Risk Factor	NE Req'd	No TIME Restriction	Week-ends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
• Install-Remove • Battery for DSX-3	Note 3						
DTMS Activity that could inter-rupt PINet, SKYnet, RNC, or RTE equip-ment. This includes DTMS/ UPS Activity	0	Yes		X	X		YELLOW
The Addition of Deicers to SKY-net antenna. (A release is re-quired prior to work start from the TSC/FMG Link Manage-ment Group)	0	Yes	X				YELLOW (Re-lease Required)
All CN activity	Note 2	Yes		X	X		N/A
All Software up-grades	4	Yes		X	X		YELLOW (SME Provides Support)
Database clean-up activity	2	Yes		X	X		N/A
Embedded roll activity - DACS III or IV	1	Yes		X	X		N/A

NOTES:

1.   Daily database backup activity is covered by DACS III Service Bulletin # 42. No Network Event Report is required for this activity.

2.   Consult SME for CN being worked.

3.   Refer to the Power Activity Matrix

4.4.1.7. Network Events Matrix - Radio Activity

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-7 Radio Activity

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity (Note 1)	Risk Factor	NE Req'd	No TIME Restriction	Weekends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
Work which can be accomplished with a short-term release using an error-free switch. i.e. Routine/FCC testing.		No	X				N/A
Waveguide/Antenna activity performed inside/outside on short term release with no impact to system	2	Yes	X				YELLOW
Installation of Digital Radio/regen terminal equipment which will not impact the system	1	Yes	X				YELLOW

Planned Activity (Note 1)	Risk Factor	NE Req'd	No TIME Restriction	Weekends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
Removal of analog radio equipment with no impact to working digital service	1	Yes	X				YELLOW
Waveguide work requiring a "Hot Cut"(to be used as a last recourse, no other options available)TSG on site	3	Yes		X	X		YELLOW
Change Notice Activity	Consult SME	Yes	Timeframe will be determined by the TSG	N/A			
Issues not covered by the above guidelines (Note 2)	Consult SME						N/A
TCPA Systems (Turn-Key Customer Provided Access)		No	CHANGE RECORD/SMOP not required but a detailed MOP suggested and customer notification and approval of the activity and time will be required.	N/A			

NOTES:

1. If there are any questions contact the Radio TSG at (888)590-5860 prompt 4

2. Issues may be discussed with the SME to determine if a Network Event is Required.

4.4.1.8. Network Events Matrix -Telemetry (TMAS)

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4.8 Telemetry Activity

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.**

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Week-ends	6:00 PM to 6am	12:00 AM to 6:00 AM	Installation Monitoring Requirement
New Installation of GTP, NTP, KDA TABS, KDA E-2, SOAR,TNC		No	X				N/A
Relocation of GTP, NTP, KDA TABS, E2,SOAR	1	Yes	X				GREEN
Running new Cable over Physically Protected working Equipment	1	Yes		X	X		
Removal of GTP, NTP Serial Port Wiring	1	Yes	X				GREEN
Removal of GTP, NTP Discrete Wiring	1	Yes	X				GREEN
Relocation of TNC	1	Yes	X				RED
All Software Updates		No	X				N/A
Issues not covered by the above Guidelines		Yes	X				N/A

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Week-ends	6:00 PM to 6am	12:00 AM to 6:00 AM	Installation Monitoring Requirement
(Note 2)							
Rearrangement of ZAET Circuits		No	X				N/A

NOTE:
1. If there is any questions contact the Telemetry TSD at (800-874-4545) Issues may be negotiated.

4.4.2. Switching and Signaling

NRC General Guidelines

• All activity in any technology surveyed by the NRC requires prior notification.

• All CHANGE RECORD/SMOPs will be written by the GNFO and if appropriate, jointly with the contracted vendor or SME.

• All work requiring an CHANGE RECORD/SMOP requires prior concurrence from the NRC. Approved CHANGE RECORD/SMOPs will be returned no later than72 hours after receipt.

• An Operations Support Systems (OSS) activity which provides surveillance capability to the NRC requires prior notification.

4.4.2.1. Network Events Matrix - 4ESS

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities. All Demand maintenance (i.e. work that does not require a change record/SMOP/Network Event) may be preformed between the hours of 18:00 to 06:00 local switch time Monday - Friday and 18:00 to 06:00 Friday through Monday.

Table 4-9 4ESS

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor (Note 1)	N.E. Req'd	No Time Restriction	6pm to 6am local switch time	10 pm to 6am local switch time	12am to 6am local switch time	Notes	Instal. Monitor Req'mt
Demand Maintenance				X			3, 4, 12	
Growth, De-growth, Modifications, Re-arrangements, Equipment CN's								
• Equip. connected to Peripheral Unit (PU) BUS	5	Yes			X		9	RED
• Equip. Not connected to BUS (RMSD2, DFA, I/O's)	2	Yes		X			6,9	GREEN
• CNI Ring, STF Frame	5	Yes			X		5,9	YELLOW
• DIU Growth in an in-service DIF Frame	3	Yes		X			8,9	YELLOW
PCO WORK (Pre Conditioning Order) in Support of								

Planned Activity	Risk Factor (Note 1)	N.E. Req'd	No Time Restriction	6pm to 6am local switch time	10 pm to 6am local switch time	12am to 6am local switch time	Notes	Instal. Monitor Req'mt
Equipment Installations								
• In cable racks with live service, or near working equipment	3	Yes			X		6,7,9	YELLOW
• Not in cable racks with live service, or near working equipment	1	No	X				7,9	GREEN
Software Updates, Generics & BWM's								
• Requiring a boot of 1B or 3B processors	3	Yes				X	2,6	RED
• Not Requiring a boot of 1B or 3B processors	1	No	X				9	GREEN
4E Power Work								
• AC Power	4	Yes			X		9	RED

Planned Activity	Risk Factor (Note 1)	N.E. Req'd	No Time Restriction	6pm to 6am local switch time	10 pm to 6am local switch time	12am to 6am local switch time	Notes	Instal. Monitor Req'mt
• DC Power within equip-ment frames (convert ers, shelves)	5	Yes			X		9	RED
• DC Power distribu-tion (BDFB, PD, ABC)	Note 11							RED
Building Work Construc./De-mol.								
• Possibil-ity of affecting working equip-ment (proximi-ty, dust, vibra-tion)	3	Yes			X		6	YELLOW
• No possibili-ty of affecting working equip-ment (distant, separate room)	3	Yes			X		6	YELLOW

Planned Activity	Risk Factor (Note 1)	N.E. Req'd	No Time Restriction	6pm to 6am local switch time	10 pm to 6am local switch time	12am to 6am local switch time	Notes	Instal. Monitor Req'mt
Air condition-ing work - fans, ducts, chilled water								
• Possibility of affecting equipment temperature	5	Yes			X		6	YELLOW
• No possibility of affecting equipment temperature	1	No	X					YELLOW

NOTES:

1. The Risk factor shown for 4ESS work is the minimum assignable risk factor. The NRC will determine the proper Risk Factor for the work when the Network Event is inputted. Risk factors are rated as follows:

   0=none 1=low 2=some 3=average 4=high 5=extreme

2. Times will be specified according to the specific application of the technology (i.e. domestic, international, govern-ment, etc.) Prep work can start as early as 6pm, but any boot will not normally be performed until after 12 am. The need for exceptions will be determined by the appropriate support organization.

3. Normal maintenance involving pack replacement or troubleshooting will be according to standard ACP, TOPS or other maintenance practices.

4. Depending on the health of the mate component or potential service of deferring maintenance, this work may be authorized by technical support during the normal business day.

5. The CNI ring maintenance is normally done during the hours of 6pm to 6am but the following maintenance flexibility is allowed:

A.   CCS-7 Signal Link maintenance and ring reconfigures related to CCS-7 Signal Link troubles at any time during the normal business day, as determined by the NRC Network Support Supervisor, if required to reduce AT&T service risk created by delaying CNI ring maintenance.

B.   The same maintenance flexibility applies to NI F-Links on 4E's, SSN S-Links on 4E's, and NI Gateway E-Links on both 4E's and STP's.

6.   Work of this type is normally done during the indicated work window, exceptions to this will be addressed on a per case review. The exception decision will be based on the nature of the work and its proximity to or threat to live service.

7.   The following guidelines may be followed for PCO work associated with the installation of new equipment in the 4ESS. When asking for work hours as outlined below, the CHANGE RECORD/SMOP must accurately reflect that power work is being performed in the proper work window, that PCO work is taking place away from in service equipment and DIU's are being added to an existing frame.

A.   PCO work in support of the installation of new equipment can be worked in the Maintenance Window of 1800 to 0600 (Local Office Time). The exceptions to this are: DC power work associated with the PCO must be done 2200-0600. AC power work must be done 2200-0600.

B.   PCO work which DOES NOT involve connections to existing equipment, running cables over working equipment, AC or DC power work, and is located in a new bay not shared may be performed between the hours of 1800 and 0600. If there is power work associated with a PCO that otherwise meets these criteria, the CHANGE RECORD/SMOP must clearly state that the power work will be performed within the times outlined in 'a' above in order to have the CHANGE RECORD/SMOP approved.

8.   MMO work for growth of equipment in the 4ESS/3B21/CNI frames must be done during the growth window of 2200 to 0600, with any DC power work being done 2200 to 0600.

An allowable exception to this is the growth of additional DIU's in an in service DIF fame can be performed 1800 to 0600. Equipment growth not connected to the bus can be grown during covered hours.

9.   Work normally scheduled in the 6pm to 6am and 10pm to 6am work windows, with a potential impact of LOW or MEDIUM may also be worked Saturday and Sunday from 0001 to 2359 Local Office Time.

10.   This work is to be performed 10pm ET to 8am ET only.

11.   Refer to the Power Activity Matrix

12.   All Demand maintenance (i.e. work that does not require a change record/CHANGE RECORD/SMOP/Network Event) may be preformed between the hours of 18:00 to 06:00 local switch time Monday - Friday and 18:00 to 06:00 Friday through Monday.

4.4.2.2. Network Events Matrix - Signal Transfer Point/ Network Control Point/ Segmentation Directory/ Usage Management System (STP/NCP/SD/ UMS)

Time listed in 4.4.2.2 Network Events Matrix for **STP/NCP/UMS is local time**. Time listed for **SD is network time**.

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-10 STP/NCP/SD/UMS

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining**

Planned Activity	Risk Factor	N.E. Req'd	6pm to 6am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
Growth, Degrowth, Rearrangement							
• All STP	4	Yes			X		YELLOW
• All NCP	4	Yes		X			YELLOW
• SD	4	Yes				8	YELLOW
• UMS	4	Yes			X		YELLOW
• Ring	4	Yes				5	YELLOW
Software Update							
• STP requiring a boot	4	Yes			X	1	YELLOW
• STP not requiring a boot	1	No			X		N/A
• Simplex NCP	1	No			X	1,3&7	N/A
• Mated NCP/ STP	1	No	X			4	N/A
• SD	1	No				8	N/A

Planned Activity	Risk Factor	N.E. Req'd	6pm to 6am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
• UMS	1	No		X		1,3&7	N/A
Maintenance Activity							
• All		No		X		2,4	N/A
Power Work							
• Supporting STP/NCP/SD/ USDS	4	Yes				6	YELLOW

NOTES:

1.   Times will be specified according to the specific application of the technology (i.e. domestic, international, government, etc.). Prep work can start as early as 6pm, but any boot will not normally be performed until after 12 am. The need for exceptions will be determined by the appropriate support organization.

2.   Normal maintenance involving pack replacement or troubleshooting will be according to standard ACP, TOPS or other maintenance practices.

3.   Normally, software updates to Autovon, FTS, some private switches and databases begin after 6pm. In all cases, specific interface agreements govern the time this work is performed.

4.   Depending on the health of the mate component or potential service of deferring maintenance, this work may be authorized by technical support during the normal business day.

5.   The CNI ring maintenance is normally done during the hours of 10 pm to 6am , but the following maintenance flexibility is allowed:

A.   CCS-7 Signal Link maintenance and ring re-configures related to CCS-7 Signal Link troubles at any time during the normal business day, as determined by the Technical Support Supervision and/or as required to reduce AT&T service risk otherwise caused by delaying CNI ring maintenance to the next window.

B.   The same maintenance flexibility applies to NI 56KB F-Links on 4E's SSN S-Links on 4E's, and NI gateway E-Links on both 4E's and STP's.

6.   Any power work supporting the STP/NCP's or their periphery requires that an informational CHANGE RECORD/ SMOP be sent to the TCC, in addition to the normal CHANGE RECORD/SMOP approval requirements of the power/ lab group.

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7. The time for performing software updates in simplex NCP's (1NCP or 2NCP) is negotiated by BU, OSS, and TCC. Although boot/init is often performed between 12 am and 6 am, the boot/init may be performed at other times, depending upon the needs of the service.

8. All scheduled maintenance activities for SD will be performed between the hours of 3pm and 10 am NWT Monday to Friday and 3pm NWT Friday through 10 am NWT Monday. The SD software Update boot window will be from 10PM to 6AM NWT only.

9. This work is to be performed 10 pm ET to 8am ET only.

10. This includes core. This excludes LNP recent changes.

11. This work is to be performed 10 pm local to 8 am local only.

12. This would be recent changes to one pair only.

13. Time determined by the ISSG and the foreign administration.

4.4.2.3. Network Events Matrix - 5ESS

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-11 Overview 5ESS

Table 4-XX 5ESS Overview by Service Type Maintenance Windows: Applies to all 5ESS Services. See Table 4 xx for specific work activities.				
Switch Type	**Switch Manufacturer**	**Service**	**Description**	**Maintenance Window (Switch Time)**
5ESS	Lucent	OSPS	AT&T LD Operator Services	10pm - Noon
5ESS	Lucent	Intertoll	AT&T Edge Network	6pm-6am
5ESS	Lucent	Local	AT&T Classic T Metro Network (includes VCDX)	6pm-6am *Comcast switch time 10p-6a
5ESS	Lucent	Local	AT&T Classic S & B Regional Network	10p - 6a or 12:00 pm - 6 am
5ESS	Lucent	STPI	AT&T International Signaling	10p - 6a

Table 4-12 Activity specific 5ESS

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	N.E. Req'd	OSPS	Intertoll	STPI	Metro-local	Region-local	Notes	Instal. Monitor Req'mt
Growth, De-growth, Rear-rangement									
• EQP connected to power "busses"	4	Yes	MW	MW	MW	MW	MW	00:01-06:00 for SE	YELLOW
• Office Dependent Data	4	Yes	MW	MW	MW	MW	MW		N/A
• Integrating modules or peripherals into a working Network Element	4	Yes	MW	MW	MW	MW	MW		RED
• Relocation, re-cabling, rewiring rearrangement, or removal associated with in-service	4	Yes	MW	MW	MW	MW	MW		YELLOW

Planned Activity	Risk Factor	N.E. Req'd	OSPS	Intertoll	STPI	Metro-local	Region-local	Notes	Instal. Monitor Req'mt
equip-ment									
• Activity that requires existing equip-ment be removed from service, i.e., removal of fuses or cross connec-tions	2	No	Anytime	Anytime	Anytime	Anytime	Anytime		N/A
• Growth activity that requires placing the system in simplex or that requires a mate switch (front end or peripher-al)	5	Yes	MW	MW	MW	MW	MW		RED
• Ring	5	Yes						5	YELLOW
CN									
• Modify-ing hardware/ software	4	Yes							YELLOW

Planned Activity	Risk Factor	N.E. Req'd	OSPS	Intertoll	STPI	Metro-local	Region-local	Notes	Instal. Monitor Req'mt
• Non-intrusive Generic program retrofits/ upgrades/patch-es	2	No	Anytime	Anytime	Anytime	Anytime	Anytime		GREEN
• Change activity that requires placing the system in simplex or that requires a mate switch (front end or peripher-al)	5	Yes	MW	MW	MW	MW	MW		RED
Software Up-date									
• System activity that requires a boot, system initializa-tion, i.e., "Phase", "System Reset", "Cold Start", "Control Card Reset/	4	Yes	MW	MW	MW	MW	MW	1	RED

Planned Activity	Risk Factor	N.E. Req'd	OSPS	Intertoll	STPI	Metro-local	Region-local	Notes	Instal. Monitor Req'mt
Switch", or "Reload Restart"									
• Not requiring a boot	3	No						3	N/A
Maintenance Activity									
• Back plane work, shelf replace-ment, Process-or hardware activity	4	Yes	MW	MW	MW	MW	MW		YELLOW
• Planned or sched-uled mainte-nance that would cause a simplex condition affecting the redun-dancy of the traffic carrying compo-nents	4	Yes	MW	MW	MW	MW	MW		YELLOW
• Planned or sched-uled mainte-	2	No	MW	MW	MW	MW	MW		GREEN

Planned Activity	Risk Factor	N.E. Req'd	OSPS	Intertoll	STPI	Metro-local	Region-local	Notes	Instal. Monitor Req'mt
nance that would not cause a simplex condition affecting the redun-dancy of the traffic carrying compo-nents									
• Activity that may impact the integ-rity of switch or transport network element or its static connec-tions	4	Yes	MW	MW	MW	MW	MW		YELLOW
Tapes	3	No	18:00-06:00	18:00-06:00	18:00-06:00	18:00-06:00	18:00-06:00	Coordi-nate with NRC	N/A
Routines	3	No				X			N/A

NOTES:

1.   Times will be specified according to the specific application of the technology (i.e. domestic, international, govern-ment, etc.) Prep work can start as early as 6pm but any boot will not normally be performed until after 12am. The need for exceptions will be determined by the appropriate support organization.

2.   Normal maintenance involving pack replacement or troubleshooting will be according to standard ACP, TOPS or other maintenance practices.

3.   Normally, software updates to Autovon, FTS, some private switches and databases begin after 6pm. In all cases, specific interface agreements govern the time this work is performed.

4.   Depending on the health of the mate component or potential service of deferring maintenance, this work may be authorized by technical support during the normal business day.

5.   The CNI ring maintenance is normally done during the hours of 10 pm to 6am but the following maintenance flexibility is allowed:

   A.   CCS-7 Signal Link maintenance and ring re-configures related to CCS-7 Signal Link troubles at any time during the normal business day, as determined by the Technical Support Supervision and/or as required to reduce AT&T service risk otherwise caused by delaying CNI ring maintenance to the next window.

   B.   The same maintenance flexibility applies to NI 56KB F-Links on 4e's, SSN S-Links on 4E's and NI Gateway E-Links on both 4E's and STP's.

6.   This work is to be performed 10 pm local to 8am local only.

NOTE:
Alternate Cooling System = capability of maintaining required environmental parameters

4.4.2.4. Network Events Matrix - DMS

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-13 DMS

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	N.E. Req'd	10:00 PM to 6am local switch time	Notes	Instal. Monitor Req'mt
Growth, Degrowth, Rearrangement					
• EQP connected to "busses"	4	Yes	X		YELLOW
CN (Prior Change Notice/Change Notice)					
• Modifying hardware/ software	4	Yes	X		
Software Update					
• Requiring a boot	4	Yes	X	1	RED
• Not requiring a boot	3	No	X	3	N/A
• Table Updates	2	No	X		N/A
Maintenance Activity					
• All (Sun. to Sat.)	3	No	X	2, 3	N/A
Tapes	3	No	X	Coordinate with NRC	N/A
Routines	3	No	X		N/A

NOTES:

1.   Times will be specified according to the specific application of the technology (i.e. domestic, International, govern-ment, etc.) Prep work can start as early as 10 pm but any boot will not normally be performed until after 12am. The need for exceptions will be determined by the appropriate support organization.

2.   Normal maintenance involving pack replacement or troubleshooting will be according to standard ACP, NTP, and other maintenance practices.

3.   Depending on the health of the mate component or potential service of deferring maintenance, this work may be authorized by technical support during the normal business day.

4.4.2.5. Network Events Matrix -Siemens

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-14 Siemens

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.**

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	Notes	Instal. Monitor Req'mt
Growth, Degrowth, Rear-rangement						
• EQP connected to power "busses"	4	Yes	No	MW		RED
• Data Base Expansions	2	No	No	MW		GREEN
• Addition of Hardware to working Network Element	4	Yes	No	MW		RED
• Integrating software modules or peripherals into a working Network Element	2	No	Yes	NO		YELLOW
• Relocation, re-cabling, rewiring rearrangement, or removal associated with in-service equipment	4	Yes		MW		RED
• Activity that requires existing equipment be removed from service, i.e., removal of fuses or cross connections	4	Yes	No	MW		RED
• Growth activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)- CCNP	5	Yes	No	MW		RED

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	Notes	Instal. Monitor Req'mt
CN						
• Modifying hardware/ software	4	Yes		MW	To be handled on a case to case basis de-termined by ATS	YELLOW
• Non- intrusive Generic program retrofits/ upgrades/patches	4	Yes	No	MW		YELLOW
• Change activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)	5	Yes	No	MW		RED
Software Update						
• System activity that requires a boot, system initialization, i.e., "Phase", "System Reset", "I-Start"	4	Yes	No	MW	1	RED
• Patching	3	No		MW		GREEN
Maintenance Activity						
• Back plane work, shelf replacement, Process-or hardware activity	4	Yes	No	MW		RED
• Planned or scheduled maintenance that would cause a simplex condition affecting the redundancy of Front End Processor	4	Yes	No	MW	d	RED
• Planned or scheduled maintenance that would not cause a simplex condition affecting the redun-	2	No			The NRC will determine the appropriate time based on the number of	RED

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	Notes	Instal. Monitor Req'mt
dancy of the peripher-als					customers served	
Tapes- MODs	3	No				GREEN
Routines	3	No			Determined by Routine- as loaded in WA-FA	N/A

Table 4-15 Ericsson

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
Growth, De-growth, Rear-rangement							
• EQP connected to power "busses" including fuse remov-al	4	Yes	No		X		RED
• Data Base Expansions	2	No	No	X			GREEN
• Addition of Hardware to working Network Element	4	Yes	No	X			RED
• Integrating software	2	Yes			X		YELLOW

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Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
modules or peripherals into a working Network Element							
• Relocation, re-cabling, rewiring rearrange-ment, or removal associated with in-service equipment	4	Yes		X		Coordinate activity with NRC as some activities will be restricted to 00:01 - 06:00	RED
• Activity that requires existing equipment be removed from service, i.e., removal of cross connec-tions	4	Yes		X		Coordinate activity with NRC as some activities will be restricted to 00:01 - 06:00	RED
• Growth activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)	5	Yes			X		RED
CN							
• Modifying hardware/ software	4	Yes		X		To be handled on a case to case basis de-	YELLOW

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
						termined by ATS	
• Non- intrusive Generic program retrofits/ upgrades/ patches	4	Yes		MW			YELLOW
• Change activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)	5	Yes			X		RED
Software Update							
• System activity that requires a boot, system initialization, i.e., "Phase", "System Reset", "I-Start"	4	Yes			X		RED
• Patching	3	No		X			GREEN
Maintenance Activity							
• Back plane work, shelf replacement, Processor hardware activity	4	Yes		X			RED

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Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
• Planned or scheduled mainte-nance that would cause a simplex condition affecting the redundancy of Front End Processor	4	Yes			X		RED
• Planned or scheduled mainte-nance that would not cause a simplex condition affecting the redundancy of the peripherals	2	NO				The NRC will determine the appropriate time based on the number of customers served	YELLOW
Tapes- MODs	3	No					GREEN
Routines	3	No			Determined by Routine- as loaded in WFA		N/A
Call Controls	3	Yes	X				GREEN

Table 4-16 DCO Switching (Stromberg Carlson/GenBand)

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
Growth, De-growth, Rear-rangement							
• EQP connected to power "busses" including fuse remov-al	4	Yes	No	X			RED
• Data Base Expansions	2	No	No	X			GREEN
Addition of Hard-ware to working Network Element	4	Yes	No	X			RED
• Integrating software modules or peripherals into a working Network Element	2	Yes	No	X			YELLOW
• Relocation, re-cabling, rewiring rearrange-ment, or removal associated with in-service equipment	4	Yes	No	X		Coordinate activity with NRC as some activities will be restricted to 00:01 - 06:00	RED
• Activity that requires existing equipment be removed from service, i.e., removal of	4	Yes	No	X		Coordinate activity with NRC as some activities will be restricted to 00:01 - 06:00	RED

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
cross connections							
• Growth activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)	5	Yes	No	X			RED
CN							
• Modifying hardware/ software	4	Yes	No	X		To be handled on a case to case basis determined by ATS	YELLOW
• Non- intrusive Generic program retrofits/ upgrades/ patches	4	Yes	No	MW			YELLOW
• Change activity that requires placing the system in simplex or that requires a mate switch (front end or peripheral)	5	Yes	No	X			RED
Software Update							
• System activity that requires a boot,	4	Yes	No	X			RED

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
system initi- alization, i.e., "Phase", "System Reset", "I- Start"							
• Patching	3	No	No	X		Email sent to notify NRC prior to the start of activi- ty	GREEN
Maintenance Ac- tivity							
• Back plane work, shelf replace- ment, Processor hardware activity	4	Yes	No	X			RED
• Planned or scheduled mainte- nance that would cause a simplex condition affecting the redundancy of Front End Processor	4	Yes	No	X			RED
• Planned or scheduled mainte- nance that would not cause a simplex condition affecting the redundancy	2	No	No			The NRC will determine the appropriate time based on the number of customers served	YELLOW

Planned Activity	Risk Factor	N.E. Req'd	Anytime	22:00 to 06:00	00:01 to 06:00	Notes	Instal. Monitor Req'mt
of the peripherals							
Tapes & or MODs	3	No	Yes				GREEN
Routines	3	No	No		Determined by Routine- as loaded in WFA		N/A
Call Controls	3	Yes	No	X			GREEN

4.4.2.6. Network Events Matrix - Synchronization

Specific Synchronization Requirements:

• The Matrices below have been defined based on potential impact using office size and critical services carried in the BITS. Please ensure you select the correct matirx based on the office for the work you are planning to complete.

Table 4-17 Synchronization

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. Also see Section 3.3.3.4 Cable Mining.**

Office >10k lines, or T3 count >100, or Tandem, STP, E911 hub, FAA, Military

Planned Activity	Risk Factor	N.E. Req'd	No restrict-tion	10pm to 6am local time	Mid to 6am local time	Instal. Monitor Req'mt
Hardware and software up-grade, modification, repair or equipment changes to TSG common control cards.	3	No		X		N/A
Upgrades, modification, repair or equipment	1	No	X			N/A

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Planned Activity	Risk Factor	N.E. Req'd	No restrict-tion	10pm to 6am local time	Mid to 6am local time	Instal. Monitor Req'mt
changes to TSG input /output cards.						
Add or remove TSG timing output lead	1	No	X			YELLOW
Intrusive testing of composite clock outputs	3	Yes		X		N/A
BITS cutover	4	Yes		X		N/A
Upgrades, modification, repair, or equipment changes to PRS	1	No	X			N/A
Temporarily retiming BITS	1	No	X			GREEN
Rearrange power to TSG, PRS	5	Yes			X	RED

Table 4-18 Synchronization (Not Tandem)

Office <10k lines and T3 count <100: Not Tandem, STP, E911 hub, FAA, Military

Planned Activity	Risk Factor	N.E. Req'd	No restrict-tion	10pm to 6am local time	Mid to 6am local time	Instal. Monitor Req'mt
Hardware and software upgrade, modification, repair or equipment changes to TSG common control cards.	3	No	X			N/A
Upgrades, modification, repair or equipment changes to TSG input /output cards.	1	No	X			N/A
Add or remove TSG timing output lead	1	No	X			YELLOW

Planned Activity	Risk Factor	N.E. Req'd	No restrict-tion	10pm to 6am local time	Mid to 6am local time	Instal. Monitor Req'mt
Intrusive testing of composite clock outputs	3	Yes		X		N/A
BITS cutover	4	Yes		X		N/A
Upgrades, modification, repair, or equipment changes to PRS	1	No	X			N/A
Temporarily retiming BITS	1	No	X			GREEN
Rearrange power to TSG, PRS	5	Yes			X	RED

4.4.2.7. Network Events Matrix - Adjuncts

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-19 Adjuncts

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Planned Activity	Risk Factor	N.E. Req'd	6pm to 8am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
Growth, Degrowth Rearrangement							
• Adjuncts	1	Yes			X		YELLOW
CN							
• Modifying hardware/ software	3	Yes			X		RED

Planned Activity	Risk Factor	N.E. Req'd	6pm to 8am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
Software Update							
• Adjuncts requiring a boot	1	Yes	X				N/A
• Adjuncts not requiring a boot	1	No	X				N/A
Maintenance Activity							
• All	0	No	X	X	X		N/A
Power Work							
• Adjuncts	1	Yes			X		YELLOW

4.4.2.8. Network Events Matrix - PrePaid Calling Card

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-20 Pre Paid Calling Card West Platform

> **NOTE:**
> **Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining**

Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
EOS/TG Project: Upgrade to software	1	No				Begin 00:01 (24 hour + activity)	YELLOW

Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
EOS/TG Project: Upgrade to IVR software	3	Yes				Begin 00:01 (24 hour + activity)	YELLOW
PIN Loads: PLC with existing PINS, add/load	1	No	X				YELLOW
PIN Activations: Activation existing PINS (AT&T capable of updating)	1	No	X				YELLOW
PIN Suspends: Deactivate PIN(S)	1	No	X				YELLOW
Rate Changes: Increase/decrease in consumer rates	1	No	X				GREEN
ALT Carrier Table Load (Terminating) Update NPA/NXX for Global and Radiant	1	No	X				YELLOW
PLC Updates/ New Additions: Updates to rates, recharge, features, etc.	1	No	X				YELLOW
Add/ Delete NPX Terminating: Update (add/delete) NPA/NXX for Global and Radiant	1	No	X				YELLOW
Cabling: Underfloor cables from server to server or data center	1	No		x			GREEN

Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
New Voice Distribution: Program Modification (rates, new features)	1	No	x				YELLOW
2 Day Rollout (Production Dist. On the 2nd Day): Based on Change Control by AT&T (implementing new product)	1	No	X				YELLOW
Adding 8YY Back up Number to Apps: Adding a customer support 800 number in the event primary fails	1	No	X				YELLOW
ATM Links: Data Transfer from one link to another (through AT&T cloud)	1	No			X		YELLOW
Binary DB Updates: Software updates to DB (INFORMIX)	1	No		X			YELLOW
Core Router Changes: IP address change or software/firmware updates	1	No		X			YELLOW
Country Code Additions: Country code additions : modify existing or add/delete	1	No	X			Domestic and International terminating traffic	GREEN
DB Alias Configurations: Database	3	Yes		X			YELLOW

Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
file configuration (IE: Hostfile)							
Site Fail Over Testing: Test disaster recovery	1	No		x			YELLOW
POSA & Recharge config updates: Preproduction Point of Sale and Recharge updates/ testing	1	No	X				YELLOW
Program Turn down: Program Termination	1	No	X				YELLOW
Server Reboot (Primary/ Secondary): Power up/ down	1	No		X			YELLOW
Shark Disc Replacement: Replacement of hardware	1	No	X				YELLOW
Stored Procedures: IVR to Informix sql modification	1	No	X				YELLOW
T1 Modifications: Disconnects or moves	1	No	X				GREEN
Tandem Migrations Rotary :Data transfer reset, live op's on ibm137 rotary callers	1	No		X			YELLOW
Alternate Carrier maintenance window	1	No		X			YELLOW

Table 4-21 Pre Paid Calling Card APT (AT&T Prepaid Technologies) Platform

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
Excel Switch Upgrade	1	Yes	X			Live Traffic removed prior to work	YELLOW
IVR / Host Update	1	No	X			Live Traffic removed prior to work	YELLOW
PIN Loads	1	No	X				GREEN
PIN Activations: Activation existing PINS (AT&T capable of updating)	1	No	X				GREEN
PIN Suspends: Deactivate PIN(S)	1	No	X				GREEN
Rate Changes: Increase/decrease in consumer rates	1	No	X				GREEN
ALT Carrier Table Load (Terminating) Update NPA/NXX for Global and Radiant	1	No	X				GREEN
Cabling: Underfloor cables from server to server or data center	3	No		X			YELLOW
New Voice Prompt Distribution to IVR's	1	No	X				GREEN

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Planned Activity	Risk Factor	N.E. Req'd	00:01 to 16:00 Central Time	00:01 to 08:00 Central time	00:01 to 06:00 Central time	Notes	Install. Monitor Req'mt
Frame Relay Link (Modify / Add new data communication links)	1	No		X			YELLOW
DB Updates: Software updates to DB	1	No		X			YELLOW
Core Router Changes: IP address change or software/firmware updates	1	No		X			YELLOW
Country Code Additions: Country code additions : modify existing or add/delete	1	No	X			International terminating traffic	GREEN
Site Fail Over Testing: Test disaster recovery	3	No	X				YELLOW
POSA & Recharge config updates: Pre-production Point of Sale and Recharge updates/testing	1	No	X				GREEN
Program Turn down: Program Termination	1	No	X				GREEN
Server Reboot (Primary/ Secondary): Power up/down	1	No	X			Traffic removed prior to work	YELLOW
T1 Modifications: Disconnects or moves	1	No	X				YELLOW
Alternate Carrier maintenance window	1	No	X				GREEN
Vesta Recharge Center (Changes affecting continuity of operation)	1	No					YELLOW

4.4.2.9. Network Events Matrix - Provisioning -

1. The Risk factor to the network shown is the minimum assignable risk factor. Risk factors are rated as follows:

    0=none   1=low   2=some   3=average   4=high   5=extreme

2. Risk factor considerations - Manual work being performed versus automatic/system generated; first phase cutovers (new work, new processes, high risk until normal part of process).

3. Domestic Impacts - impacts to the customer. Blocked call impacts are rated as follows:

    High - >2,000   Medium – 1,000-1,999   Low <1,000

    International considerations for IMPACT - impact to customer(s). Blocked call impacts are weighted as follows:

TOP Revenue/Targeted Countries		
Customer Impact	% Capacity Affected	Potential Blocked Calls
3 = HIGH	10% or greater	>20K
2 = MEDIUM	8 - 9%	1K - 2K
1 = LOW	2 - 7%	<1K

NON-TARGET COUNTRIES/NETWORKS (i.e. bilateral networks, ATPs)		
Customer Impact	% Capacity Affected	Potential Blocked Calls
3 = HIGH	50% or greater	>20K
2 = MEDIUM	30 - 49%	1K - 2K
1 = LOW	10 - 29%	<1K

4. Impact considerations - Number of customers potentially impacted; size of customers; Service Impacts (e.g. turning up new links, there is no service so impact would be low to no impact); time of day/volume of network traffic.

5. Documented procedures (M&Ps, job aids, checklists) are always required when performing provisioning activities.

6. PASS (Provisioning Administration Support System) forms are required for all Message Provisioning **Trunking and Routing Activities and for NODAL, 5ESS ADL and AVA activities.**

7. Any work impacting 911 must be coordinated with the controlling 911 center or PSAP team.

4.4.2.10. Network Events Matrix - Transport Provisioning

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-22 Transport Provisioning

Planned Activity (Note 1)	Risk Factor	Change Record	No TIME Restriction	Week-ends	10 pm - 06 am local time	Note
Single DS0 provisioning change with customer release	1	No	X			
Single DS1 provisioning changes with customer release (line code & framing changes)	1	No	X-			
DDM-1000 B8ZS/AMI option setting on existing service	4	No			X	
DDM-1000 B8ZS/AMI option setting on new service	4	No	X			1
DS3 provisioning adds and dis-connects	1	No	X			
DS3 provisioning adds	1	No	X			
DS3 provisioning changes,	5	Yes		X	Xx	
DS3 provisioning disconnects	3	No	X			
Equipment alarm verification on inservice equipment	5	Yes			X	
Equipment alarm verification on non service equipment	1	No	X			
Single DS0 & DS1 recabling-facility not in service	1	No	X			
Single DS0 & DS1 recabling-in service facility	5	No			X	
Single T3 recabling- facility not in service	1	No	X			
Single T3 recabling- facilityt in service	1	Yes		X		
DDM-1000 modifications, in-cluding C-bit changes		No		X	X L-S	
Fiber rolls and reroutes	5	Yes		X	X L-S	
Project related work without other specified hours	Note 2	Yes		X		

NOTE:
Remote work may be done during the day but any work on site must be coordinated with the local office super-visor and done in the Maintenance Window.

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-23 4ESS Provisioning

Planned Activity	Risk Factor/ Impact	N.E. Report Req'd	PASS Form Req'd	10PM Local to 8 AM Local	Work anytime	Notes
Single Dialed Number recent change- Advanced 800 Service 4ESS	1/L	No	No	X		6
10 digit batch processing	1/L	No	No	X		
CCS7 link activity- physical translations	1/L	No	No	X		5
ISDN D channel recent changes including adjuncts	1/L	No	No		X	1
Create/activate RC form 809 via CNRDB	1/H	Yes	No			3-Feb
RPP Nodal Customer Activity	1/H	No	No			4
AT&T Network Connections	1/L	No	No			4
ATP Provisioning	2/H	Yes	No	X		
STAR Provisioning	3/H	Yes	No	X		
Issue Facility	1/L	No	No		X	1
Issue Circuit	1/L	No	No		X	1
Test and Turn up	1/L	No	No		X	1
End Office Replacement	4/H	Yes	Yes	X		
Capacity Chase	1/l	Yes	Yes	X		
Pop Rehome	1/L	Yes	Yes	X		
CCS7 Conversion	3/M	Yes	Yes	X		

Planned Activity	Risk Factor/ Impact	N.E. Report Req'd	PASS Form Req'd	10PM Local to 8 AM Local	Work anytime	Notes
DS1/DS3 roll	1/L	No	Yes	X		
Code Moves	4/H	Yes	Yes	X		7
Feature Group C/D Conversion	3/M	No	Yes	X		
Pre-testing for cutovers	1/L	No	Yes	X		
Cleanup activities such as: • TFNBs • DPC codes • REV/GLARE	2/M	No	Yes	X		
Directory Assistance Routing	4/H	Yes	Yes	X		
Provision New 4ESS	5/H	Yes	Yes	X		
Add Circuits/TSG	1/L	No	Yes		X	1
Delete Circuits/TSG	2/M	No	Yes		X	1
DECOS Cutover	4/H	Yes	Yes	X		
Trunking for 35 Services	1/L	No	No		X	1
Routing APN	3/M	No	No		X	1
Routing AVA	4/H	Yes	Yes		X	1
Routing - ADL	4/H	Yes	Yes		X	1
Trunking - AVA	1/L	No	No		X	1
Trunking - ADL	1/L	No	No		X	1
Clean up Routing Activities for AVA/ADL requiring 4ESS ac tivity	3/M	Yes	No		X	1
Clean up Trunking Activities	3/M	No	No		X	1
TSG Character Changes	3/M	Yes	Yes	X		

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NOTES:

1. This work can be done at any time.

2. The NOC, NESAC, and all key project team members are required to be on a conference call during the initial activation of a feature item. All testing and monitoring is done at this time to ensure that everything is working properly…minimizing the risk factor.

3. The Feature Sponsor is responsible for providing the NOC with the activation schedule and times (NOC has final decision on times).

4. This is customer specific information. The time of the cutover is determined by the customer.

5. This work is performed only under the direction of the Network Control Center.

6. Single Dialed Number recent changes for accounts residing in the Advanced 800 2NCPS in the AT&T Signaling Network have an expanded window from 10:00PM ET to 9:30AM ET.

7. 200 or more codes require a Change Record/ entry in SNEM/AOTS. 5 or fewer codes may be done anytime. 6-200 must be done in the MW but do not require and entry in SNEM/AOTS

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-23 Signal Transfer Point/ Network Control Point/ Distributed Computing Platform (STP/NCP/DCP (SD, UMS)

Planned Activity	Risk Factor / Impact	N.E. Report Req'd	Network Notifier/Pass Form Req'd	10PM Local to 8AM Local	Work Anytime	Notes
Legacy T- only STP Code recent change (IDB) In watts database for 800 service	1/H	Yes	No	X		2
STP Code recent change (LNP porting)	1/L	No	No		X	
STP Code recent change (all other) LIDB, CNAM, CLASS	1/L	No	No		X	2
STP Routing recent change (change & delete only)	1/H	Yes	No	X		2
STP Screening recent change (change & delete only)	1/H	Yes	No	X		2

Planned Activity	Risk Factor / Impact	N.E. Report Req'd	Network Notifier/Pass Form Req'd	10PM Local to 8AM Local	Work Anytime	Notes
STP Link Info recent change	1/L	No	No		X	2, 3
International STP recent changes	1/H	No	No			1
NCP/SCP load switch	1/H	Yes	No	X		
NCP/SCP specification file and site data updates	1/L	No	No	X		
NCP/SCP network table up-dates	1/H	Yes	No	X		
Legacy T-SD site data updates	1/L	No	No	X		
Legacy T-SD NPA Splits	1/H	Yes	No	X		

1. Time determined by the ISSG and the foreign administration.

2. Can also be performed 10PM ET Friday through 8AM ET Monday.

3. Alcatels must be completed in the Maintenance Window with an Event Notifier

Table 4-15 STP/NCP/SD/UMS

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Planned Activity	Risk Factor	N.E. Req'd	6pm to 6am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
Growth, De-growth, Rear-rangement							
• All STP	4	Yes			X		YELLOW
• All NCP	4	Yes		X			YELLOW

Planned Activity	Risk Factor	N.E. Req'd	6pm to 6am	8 pm to 6am	10 pm to 6am	Notes	Instal. Monitor Req'mt
• SD	4	Yes				8	YELLOW
• UMS	4	Yes			X		YELLOW
• Ring	4	Yes				5	YELLOW
Software Update							
• STP requiring a boot	4	Yes			X	1	YELLOW
• STP not requiring a boot	1	No			X		N/A
• Simplex NCP	1	No			X	1,3&7	N/A
• Mated NCP/ STP	1	No	X			4	N/A
• SD	1	No				8	N/A
• UMS	1	No		X		1,3&7	N/A
Maintenance Activity							
• All		No		X		2,4	N/A
Power Work							
• Supporting STP/NCP/ SD/USDS	4	Yes				6	YELLOW

NOTES:

1. Times will be specified according to the specific application of the technology (i.e. domestic, international, government, etc.). Prep work can start as early as 6pm, but any boot will not normally be performed until after 12 am. The need for exceptions will be determined by the appropriate support organization.

2. Normal maintenance involving pack replacement or troubleshooting will be according to standard ACP, TOPS or other maintenance practices.

3.   Normally, software updates to Autovon, FTS, some private switches and databases begin after 6pm. In all cases, specific interface agreements govern the time this work is performed.

4.   Depending on the health of the mate component or potential service of deferring maintenance, this work may be authorized by technical support during the normal business day.

5.   The CNI ring maintenance is normally done during the hours of 10 pm to 6am , but the following maintenance flexibility is allowed:

   A.   CCS-7 Signal Link maintenance and ring re-configures related to CCS-7 Signal Link troubles at any time during the normal business day, as determined by the Technical Support Supervision and/or as required to reduce AT&T service risk otherwise caused by delaying CNI ring maintenance to the next window.

   B.   The same maintenance flexibility applies to NI 56KB F-Links on 4E's SSN S-Links on 4E's, and NI gateway E-Links on both 4E's and STP's.

6.   Any power work supporting the STP/NCP's or their periphery requires that an informational CHANGE RECORD/SMOP be sent to the TCC, in addition to the normal CHANGE RECORD/SMOP approval requirements of the power/lab group.

7.   The time for performing software updates in simplex NCP's (1NCP or 2NCP) is negotiated by BU, OSS, and TCC. Although boot/init is often performed between 12 am and 6 am, the boot/init may be performed at other times, depending upon the needs of the service.

8.   All scheduled maintenance activities for SD will be performed between the hours of 3pm and 10 am NWT Monday to Friday and 3pm NWT Friday through 10 am NWT Monday. The SD software Update boot window will be from 10PM to 6AM NWT only.

9.   This work is to be performed 10 pm ET to 8am ET only.

10.   This includes core. This excludes LNP recent changes.

11.   This work is to be performed 10 pm local to 8 am local only.

12.   This would be recent changes to one pair only.

13.   Time determined by the ISSG and the foreign administration.

Table 4-24 Translations any switch except 4ESS

Planned Activity	Risk Factor/ Impact	Change Record Required	10PM Local to 6AM Local	PASS Record	Work anytime	Notes
End Office: Replacement/Conversion	5/H	Yes	X	X		1
Pop Rehome	3/M	No	X	X		
CCS7 Conversion	4/H	Yes	X	X		
Code Rehomes	4/H	No	X	X		
Pre-testing for cutovers	1/L	No			X	
Cleanup activities related to routing and/or screening (not 2STP)	3/H	Yes	X			
Cleanup activities related to billing, etc	2/L	No			X	
Addition of new Standards into switch	1/L	No			X	
Change or delete of standards in the switch	3/H	Yes	X			
Add Circuits	1/L	No			X	
Delete Circuits	2/M	No		X	X	4
Area Code Relief Work	4/H	Yes	X			
911 Work	4/H	Yes				2
Daily Provisioning	1/L	No			X	3
Capacity Chase/ Deload	4/M	Yes	X	X		
New End Office/TTA	4/H	Yes	X			
Feature Group C/D Conversion	3/M	Yes	X		X	
Routing APN/TSAA	4/H	Yes	X		X	

NOTES:

1. Prep work may begin as early as 10:00 pm local but intrusive work may begin until midnight.

2. Controlling Center must coordinate with 911 Resolution Center.

3. Code Openings, new Customer Trunks, Centrex, PRIs, Hunt Groups, Route Indexes, Announcements, AIN Trans-
   lations, etc

4. PASS form is not required if less than 50% of the trunk group is to be deleted.

Table 4-25 Provisioning- LD Routing Domestic and International

This table contains unique routing translation requests, which are outside of the normal work center methods and proce-
dures.

Planned Activity	Risk Factor/ Impact	N.E. Report Req'd	PASS Form Required	10PM Local to 6AM Local	Work anytime
Provisioning - LD Routing					
General	4/H	Yes	No	X	
FEN Blocking	4/M	Yes	No	X	
II/OLI	4/H	Yes	No	X	
International- National number changes or Country Numbering Changes	4/H	Yes	No	X	1
Routing Projects >200 Codes	4/H	Yes	Yes	X	
Deload Project Routing for First Tandem	4/H	Yes	Yes	X	

1. Work must be conducted based on International non- busy period.

Table 4-26 End Office Translations Including TOPS & Tandem

Planned Activity	Risk Factor/ Impact	Change Record Required	10PM Local to 6AM Local	Work anytime	Notes
End Office: Replacement/Conversion	5/H	Yes	X		
Pop Rehome	3/M	No	X	X	1
CCS7 Conversion	4/H	Yes	X		
Code Rehomes	4/H	No	X	X	1

Planned Activity	Risk Factor/ Impact	Change Record Required	10PM Local to 6AM Local	Work anytime	Notes
Pre-testing for cutovers	1/L	No		X	
Cleanup / standardization	3/H	No		X	2
Add/ Delete Circuits	1/L	No		X	
Area Code Relief Work	4/H	Yes	X		5
911 Work	4/H	Yes			3
Daily Provisioning	1/L	No		X	4

NOTES:

1. Per Customer request

2. Internal notification required.

3. This work must be coordinated with 911 Resolution Center.

4. Code Openings, new Customer Trunks, Centrex, PRIs, Hunt Groups, Route Indexes, Announcements, AIN Translations, etc

5. During this work only critical activities need to be scheduled duringthe maintenance window; some examples o critical activities include: Overlay= 10 digit mandatory dialing date; NPA split=ANI conversion date and blocking 7 digit dialing across NPA. Please contact the controlling center or the SME if you are unsure of the activity

4.5. Network Events Matrices - MMOC Activities Guidelines

The decision on when to perform a service should be based on the impact that a process failure can have on AT&T customers, not on how well we believe we can execute the change or the probability of process success. In regards to work scheduling, the MMOC is an anomaly, since the functions the Operations Support Systems (OSS) provide are most critical during the recommended Network Event work Activity time frame. For this reason, it is imperative that the primary customers affected by the OSS concur in the time that the MMOC performs its work.

The following matrices are intended to assist in the determination of when the MMOC will perform Network Event Work activities. These are RECOMMENDED guidelines. However, a customer release MUST be obtained before performing any Network Event. For many EF&I and Building Management Activities, Installation Monitoring Requirements denoting Red, Yellow or Green steps have been added to the tables.

4.5.1. Network Events Matrix - Transport and Outside Plant - MMOC

Below are the rules for monitoring Installation steps or performing maintenance activities. The matrix also indicates when maintenance can be done.

4-27 Transport and Outside Plant - MMOC

Planned Activity	Risk Factor	Apv'd CHANGE RECORD/ SMOP Req'd	Customer Concur-rence	NE Request	6 a.m. to 6 p.m.	6 p.m. to 6 a.m.	12 a.m. to 6 a.m.	Week-end	Notes
Generic Upgrades									
Preparatory work	2	Yes	Yes	Yes	X			X	1
Critical Steps	5	Yes	Yes	Yes				X	1
Reconfigura-tions	4	Yes	Yes	Yes			X	X	1
Maintenance	2	Yes	Yes	Yes		X		X	1
Other Planned Activities	3	Yes	Yes	Yes		X			1,4
Communications Link Work:									
No Communi-cations inter-ruption	1	Yes	Yes	Yes		X		X	
Interrupts communica-tion to net-work elements	4	Yes	Yes	Yes		X		X	
X = Recommended time to do work.									

4.5.2. Network Events Matrix - Switching and Signaling - MMOC

Rules for monitoring **Installation** steps or performing maintenance activities. The matrix also indicates when maintenance can be done.

Table 4-28 Switching and Signaling - MMOC

Planned Activity	Risk Factor	Apv'd CHANGE RECORD/ SMOP Req'd	Customer Concur-rence	NE Request	6 a.m. to 6 p.m.	12 a.m. to 6 a.m.	Week-end	Notes
Generic Upgrades	1	Yes	Yes	Yes	X			4
Reconfigurations	2	Yes	Yes	Yes	X			1,2
Preventative Maintenance w/ Spare	0	Yes	Yes	Yes	X			1,2,4
Preventative Maintenance w/ out Spare	2	Yes	Yes	Yes			X	4,7
CN/BWM	1	Yes	Yes	Yes	X		X	7
X = Recommended time to do work.								

4.5.3. Network Events Matrix - Power - MMOC

Rules for monitoring Installation steps or performing maintenance activities. The matrix also indicates when maintenance can be done.

Table 4-29 Power - MMOC

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	6am to 6pm	12 am to 6am	Weekend	Notes	Instal. Monitor
DC Power Additions	4	GNFO	Yes		X		3	RED
AC -PDU Breaker Addition	3	MMOC	Yes		X			RED

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	6am to 6pm	12 am to 6am	Weekend	Notes	Instal. Monitor
AC -PDU Instal-lation	4	MMOC	Yes		X	X		RED
UPS Test	2	MMOC	Yes		X	X	3	N/A
Battery Test	4	MMOC	Yes		X			N/A
Performing ANY work inside ac-tive PDU, Break-er Panel or BDFB	5	MMOC	Yes		X			RED
HVAC- Multi	4	MMOC	Yes		X	X		RED
HVAV - Indiv.	0	MMOC	Yes	No time re-strict-ions			3	GREEN
Under-floor cleaning	2	MMOC	Yes	No time re-strict-ions			7	N/A
X=recommended time to do work								

NOTES:

1.   Utilize Disaster Recovery or Spare Processor whenever possible.

2.   Utilize off-line back-up window.

3.   Work performed through GNFO and in conjunction with Building Operations.

4.   Times will be specified according to specific technology and Service Administration System release practices to transfer on to the spare processor.

5.   NRC datakit activity requires concurrence by NMC, NOC and other affected groups within the Center.

6.   Work performed through GNFO in partnership with MMOC and primary customer.

7.   Weekend/off-peak activity is preferred to increase reliability and minimize customer and/or employee impact.

Any other OSS work activity that the MMOC performs that may interrupt service must be scheduled through the primary customer or customer care center affected with an approved Network Event before any work begins.

4.5.4. Network Events Matrix - General & Provisioning/Maintenance -

GNFO, CCS Operator Services, BCS & DCS - MMOC

Rules for monitoring Installation steps or performing maintenance activities. The matrix also indicates when maintenance can be done.

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Table 4-30 General & Preventative Maintenance

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	6am to 6pm	12:00 AM to 6am	Weekend	Notes	Instal. Monitor Req'mt
Generic Updates	1	Yes	Yes		X	X	2,4	N/A
Preventative Maintenance w/ Spare	0	Yes	Yes	No time re-striction			2,4	N/A
Preventative Maintenance w/ out Spare	1	Yes	Yes		X	X		N/A
Moves	2	Yes	Yes			X	2,4	N/A
Reconfiguration	2	Yes	Yes			X	2,4	N/A
X=recommended time to do work								

NOTES:

1. Utilize Disaster Recovery or Spare Processor whenever possible.

2. Utilize off-line back-up window.

3.   Work performed through GNFO and in conjunction with Building Operations.

4.   Times will be specified according to specific technology and Service Administration System release practices to transfer on to the spare processor.

5.   NRC datakit activity requires concurrence by NMC, NOC and other affected groups within the Center.

6.   Work performed through GNFO in partnership with MMOC and primary customer.

7.   Weekend/off-peak activity is preferred to increase reliability and minimize customer and/or employee impact.

Any other OSS work activity that the MMOC performs that may interrupt service must be scheduled through the primary customer or customer care center affected with an approved Network Event before any work begins.

4.6. Datakit - All Customers - MMOC

NOTE:
Cable mining and equipment removal are addressed in Table 4-1 General Activities. See also Section 3.3.3.4 Cable Mining

Table 4-31 MMOC- Datakit

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	6am to 6pm	12 am to 6am	Weekend	Notes	Instal. Monitor Req'mt
Generic Up-dates	4	Yes	Yes	X	X		5	N/A
Reconfigura-tions	3	Yes	Yes		X	X	5	N/A
Database	2	Yes	Yes	X		X	5	N/A
Security Server	2	Yes	Yes		X			N/A
Communica-tion Link Work	3	Yes	Yes	X			4	N/A
Installations	1	MMOC	Yes	No time re-stric-tion			3,6	YELLOW

Planned Activity	Risk Factor	Customer Concur- rence	N.E. Req'd	6am to 6pm	12 am to 6am	Weekend	Notes	Instal. Monitor Req'mt
F.R.S., SAM, MICOMM & MUX's	3	Yes	Yes	X			4	YELLOW
X=recommen- ded time to do work								

NOTES:

1. Utilize Disaster Recovery or Spare Processor whenever possible.

2. Utilize off-line back-up window.

3. Work performed through GNFO and in conjunction with Building Operations.

4. Times will be specified according to specific technology and Service Administration System release practices to transfer on to the spare processor.

5. NRC datakit activity requires concurrence by NMC, NOC and other affected groups within the Center.

4.7. Network Events Matrix - NSDnet Activities Guidelines

4.7.1. NSDnet - Datakit

Table 4-32 NSDnet - Datakit

Planned Activity	Risk Factor	Customer Concur- rence	N.E. Req'd	No Time Restriction	Week - ends	6 pm to 6 am	6 am to 6pm	12 am to 6 am
Generic Upgrades	4	Yes	Yes					X
Database/Csr	2	No	No	X				

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	No Time Restriction	Week - ends	6 pm to 6 am	6 am to 6pm	12 am to 6 am
Database/Ntwk	3	Yes	Yes					X
Security Server/Csr	2	No	No	X				
Security Server/Ntwk	3	Yes	Yes					X
Facility Work/New	1	No	No	X				
Facility Work/ Change	3	Yes	Yes					
New Installs	1	No	No	X				

4.7.2. NSDnet - IP

Table 4-33 NSDnet - IP

Planned Activity	Risk Factor	Customer Concur-rence	N.E. Req'd	No Time Restriction	Week - ends	6 pm to 6 am	6 am to 6pm	10 pm to 6 am
IOS	3	Yes	Yes					X
Hardware Adds/ Changes	2	Yes	Yes					X
Software Changes/ Csr	1	No	No	X				
Software Changes/ Ntwk	4	Yes	Yes					X
Facility Work/New	1	No	No	X				
Facility Work/ Change	3	Yes	Yes					X
New Installs/new equip.	1	No	No					

4.8. Network Events Matrix - Power, Infrastructure and Alarm Activities Guidelines

Table 4-34 Power Activity

> **NOTE:**
> Cable mining and equipment removal are addressed in Table 4-1 General Activities.

See also Section 3.3.3.4 Cable Mining.

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Require-ment
AC circuit breaker testing, maintenance and replacement that put a DC power plant on discharge							
Category 1 Buildings (Network Equipment Spaces)	3	Yes		X	X		**RED**
Pops	3	Yes	X				**RED**
Regens	2	Yes	X				**YELLOW**
AC circuit breaker activity or testing that will remove power from NON-ESSENTIAL panels or equipment							
All Locations	1	Yes	X				**YELLOW**
AC circuit breaker activity or testing that will shut down redundant essential Heating, Ventilating and Air Conditioning (HVAC) equipment							
All locations	1	Yes	X				**GREEN**
AC circuit breaker activity, testing, or bus duct torquing that will shut down NON- REDUNDANT essential HVAC equipment.							

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Requirement
Category 1 Buildings (Network Equipment Spaces)<15 mins and no potential to impact service	2	Yes	X				**GREEN**
Category 1 Buildings (Network Equipment Spaces)>15 mins and potentially service impacting	4	Yes		X	X		**RED**
AC bus duct testing							
All Locations	3	Yes	X				**YELLOW**
AC bus bar or cable testing, maintenance or torquing that will shut down redundant essential HVAC equipment.							
Category 1 Buildings (Network Equipment Spaces)<15 mins and no potential to impact service	2	No	X				**GREEN**
Category 1 Buildings (Network Equipment Spaces)>15 mins and potentially service impacting	4	Yes		X	X		**RED**
AC bus bar or cable testing, maintenance or torquing that will shut down NON-REDUNDANT essential HVAC equipment							
Category 1 Buildings (Network Equipment Spaces) <15 mins	3	Yes		X	X		**YELLOW**

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Require-ment
All others <15 mins and no potential to impact service	2	No	X				**YELLOW**
Category 1 Buildings (Network Equipment Spaces) and all others, >15 mins and potentially service impacting	4	Yes		X	X		**RED**
Physically installing or removing AC power cabinets adjacent to <= 6') working Network equipment. NOT INVOLVING THE DISCONNECTING OF BUS OR CABLE IN WORKING EQUIPMENT.							
All Locations	3	Yes	X				**YELLOW**
New AC power equipment installation and acceptance NOT adjacent to working equipment.							
All Locations	1	No	X				**GREEN**
Terminating, removing or tapping ENERGIZED AC conductors that are non essential house power							
All Locations	2	Yes	X				**YELLOW**
Terminating, removing or tapping ENERGIZED AC conductors essential to Network power	4	Yes			X		
Terminating or removing AC conductors from accessible DE-ENERGIZED circuit break-							

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Requirement
ers(s) in cabinets where energized surfaces or components have been insulated and/or protected							
All Locations	3	Yes	X				**YELLOW**
Terminating, removing or tapping de-energized AC conductors.							
All Locations	1	No	X				**GREEN**
Adding or removing AC raceways over temporarily protected power equipment							
All Locations	3	Yes	X				**YELLOW**
Installing or removing AC raceways in power cabinets where energized surfaces or components have been temporarily insulated and/or protected							
All Locations	3	Yes	X				**YELLOW**
Pulling new AC conductors into power cabinets where energized surfaces or components have been insulated and/or protected							
All Locations	3	Yes					**YELLOW**
Planned service entrance transformer(s) maintenance or replacement (If required, engine runs performed per guidelines).							

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Requirement
All Locations	3	Yes	X				**RED**
Single phase AC branch circuit fuse installation / removal or operating a circuit breaker if action does not put a power plant on discharge.							
All Locations	2	No	X				**GREEN**
Installing or placing temporary protection (barriers and/or insulation) over or in AC and DC equipment							
All Locations	2	No	X				**YELLOW**
Opening equipment doors or removing cabinet doors with or suspected safety interlocks that impacts essential Network equipment (interlock causes a switch or breaker to open when door/cover is opened)	4	Yes		X	X		**RED**
Opening equipment doors -Safety interlocked with a switch or breaker with bypass mechanism	1	No	X				**GREEN**
AC equipment visual inspections							
All Locations	1	No	X				**GREEN**
AC amperage readings using clamp on ammeter							
All Locations	2	No	X				**GREEN**
AC voltage readings using hand held meter	1	No	X				**GREEN**

Planned Activity	Risk Factor	Network Event Required	No Time Restriction	Anytime Weekends	5pm to 6am	10pm to 6am	Installation Monitoring Require-ment
All Locations							
Infrared scanning	1	No	X				**GREEN**
All Locations							
Indicator lamp replace-ment	0	No	X				**GREEN**
Planned AC Activities that put a DC power plant on discharge - not the An-nual Power Review or routine engine run	4	Yes		X	X		**GREEN**

4.8.1. Network Events Matrix - Building Infrastructure

The matrix also indicates when maintenance can be done and provides rules for monitoring installation steps or performing Maintenance activities.

Table 4-36 Building Infrastructure

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
General Activities							
Repair of Equipment that has Interrupted Service		No	X				N/A
Repair of Equipment that is in Service degrading condition		No	X				N/A
Repair of equipment that is necessary to provide service		No	X				N/A
Routines, when no serv-ice jeopardy exists		No	X				

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require- ment
Installation of new equip- ment when no contact with working equipment exists		No	X				GREEN
Removal of equipment where risk to working equipment exists	3	Yes		X	X		YELLOW
Infrastructure Mainte- nance and Repair							
Water Tanks and Wa- ter Systems_if potential to impact service._ Any construction, repair, or any other activity other than visual inspection of water storage systems/tanks that are installed in network buildings.	5	Yes				X	RED
Water Tanks and Wa- ter Systems_no impact to service or is domestic wa- ter only_ Any construction, repair, or any other activity other than visual inspection of water storage systems/tanks that are installed in network buildings.	0	No	X				GREEN
Chiller and water sys- tems							
• Chiller walk through and inspections	0	No	X				GREEN
• Chiller monthly maintenance	0	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Requirement
with no equipment shutdown							
• Chilled water or condenser water pumps - quarterly maintenance with no equipment shutdown	0	No	X				GREEN
• Chiller eddy current test-IF NO ALTERNATE COOLING SYSTEM AVAILABLE and THERE IS POTENTIAL TO IMPACT SERVICE	5	Yes			X		RED
• Chiller eddy current test during seasonal shutdown	0	No	X				GREEN
• Chilled or condenser water piping hot or cold tap with no interruption to Network equipment cooling (Temp or redundant cooling)	1	No	X				GREEN
• Interrupting cooling to Network areas	4	Yes		X	X		RED
Air handling or fan systems							
• Air handler routine maintenance	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• Air handler maintenance on equipment supporting Category 1 Build-ing Network Equipment spaces without redundancy	4	Yes		X	X		RED
• Air handler maintenance on equipment supporting Category 1 Build-ing Network Equipment spaces with redundancy	2	No	X				GREEN
• Exhaust fan maintenance	1	No	X				GREEN
Variable Air Volume (VAV) maintenance							
• On equipment supporting Category 1 Build-ing Network Equipment spaces without redundancy	3	Yes			X		YELLOW
• On equipment supporting Category 1 Build-ing Network Equipment spaces with redundancy	0	No	X				GREEN
• Smoke purge systems in Category 1 Build-	3	Yes			X		YELLOW

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
ing Network Equipment spaces							
• Smoke purge systems in all other areas	1	No	X				GREEN
• Fire damper maintenance	1	No	X				YELLOW
• Fire damper maintenance that has the potential to disrupt cooling to Category 1 Building Network Equipment spaces	4	Yes		X	X		
Environmental control system							
• Electrical/DDC control system maintenance	2	No	X				GREEN
• Electrical/DDC control system maintenance if disruption to cooling will occur in Category 1 Building Network Equipment spaces	3	Yes		X	X		YELLOW
• Network space temperature adjustments, not exceeding allow-able Rate of Change's (ROC).	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• DDC-database changes if no impact to essen-tial equipment	1	No	X				GREEN
• If disruption to cooling will occur in Category 1 Building Network Equipment spaces	3	Yes		X	X		RED
• Air compressor maintenance disrupting control air to HVAC supporting Category 1 Build-ing Network Equipment spaces without redundancy.	4	Yes			X		RED
• Air compressor maintenance supporting non Network areas or on systems with redundancy for any area.	1	No	X				GREEN
Cooling Towers							
• Water treatment	0	No	X				GREEN
• Tower Inspec-tion	1	No	X				GREEN
• Tower cleaning/ with redundant towers	1	No	X				GREEN
• During seasonal shutdown	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
° IF NO ALTER-NATE COOLING SYSTEM AVAILA-BLE AND CAN IMPACT SERVICE							
	5	Yes		X	X		RED
Humidifier systems							
• Humidifier maintenance	1	No	X				GREEN
Early warning fire de-tection and suppression systems							
Fire alarm system month-ly maintenance, no cool-ing disruptions.	1	No	X				GREEN
• Fire alarm system annual maintenance	1	No	X				GREEN
• Fan shutdown during test <15 Min	1	No	X				GREEN
• Fan shutdown during test >15 Min	3	Yes		X	X		YELLOW
• NON-NETWORK AFFECTED AREAS	1	No	X				GREEN
• Sprinkler, Halon and CO2	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
Suppression Systems							
• Sprinkler, Halon and CO2 Suppression Systems instal-ling pipe or charging pipe with water or chemical over Category 1 Build-ing Network Equipment spaces	4	Yes		X	X		RED
Building support equip-ment							
• Lights - replacing ballast or repair directly over WORKING NETWORK SWITCHING EQUIPMENT ONLY	3	No		X	X		YELLOW
Boiler/Heat Systems							
• Boiler/heating systems mainte-nance	1	No	X				GREEN
• Boiler/heating systems mainte-nance with potential to impact Category 1 Building Network Equip-ment spaces	3	Yes		X	X		YELLOW
• Water heaters	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• Electric strip heaters	1	No	X				GREEN
• If heater impacts Air handler routine mainte-nance, if no redundant system is availa-ble.	4	Yes		X	X		RED
• In-duct heaters	1	No	X				GREEN
• Directly over WORKING NETWORK EQUIPMENT ONLY	3	No		X	X		YELLOW
Building Alarm Test (must notify control cen-ter)	1	No	X				GREEN
Construction,-Installa-tion and Removal							
Construction/demolition of walls and partitions							
• AFFECTS NETWORK AREAS WITH DUST PARTI-TIONS	1	No	X				GREEN
	1	Yes	X				GREEN
• Air handling systems	1	No	X				GREEN
• AFFECTS NETWORK AREAS- if redun-dancy not availa-ble	4	Yes		X	X		RED

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• AFFECTS NETWORK AREAS- if redun-dancy available	1	Yes	X				YELLOW
• Sprinklers/Fire Suppression systems no impact	1	Yes	X				GREEN
• In Category 1 Building Network Equipment spaces OVER WORKING SWITCHING EQUIPMENT Spaces After rigid water proof protection has been installed	4	Yes		X	X		RED
	1	No	X				GREEN
• Chiller systems no impact	1	No	X				GREEN
• In Category 1 Building Network Equipment spaces - if redun-dancy not availa-ble	4	Yes		X	X		RED
• AFFECTS NETWORK AREAS- - if redundancy or alternative cooling available or during season-al shutdown	1	Yes	X				YELLOW
• Ductwork no impact	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• OVER WORKING SWITCHING EQUIPMENT	3	Yes			X		YELLOW
• OVER WORKING SWITCHING EQUIPMENT Spaces after rigid protection has been installed	1	No	X				GREEN
• Cooling Towers no impact	1	No	X				GREEN
• AFFECTS Category 1 Build-ing Network Equipment spaces - if redun-dancy not availa-ble	4	Yes		X	X		RED
• AFFECTS NETWORK AREAS- if redun-dancy or alterna-tive cooling avail-able or during seasonal shutdown	1	Yes	X				YELLOW
• HVAC control systems no impact	1	No	X				GREEN
• If work involves shutting down essential cooling >15 mins In Category 1 Build-ing Network Equipment space	4	Yes		X	X		YELLOW

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• EWFD systems no impact	1	No	X				GREEN
• If work involves shutting down essential cooling >15 mins In Category 1 Building Network Equipment space	3	Yes		X	X		YELLOW
• Roof repair - replacement	1	No	X				GREEN
• AFFECTS NETWORK AREAS	2	Yes					
• Pipe cutting and welding (Permit required)	1	Yes	X				YELLOW
• AFFECTS NETWORK AREAS (Permit required)	2	Yes	X				YELLOW
• Chilled or condenser water piping hot or cold tap	1	Yes	X				GREEN
• If work involves shutting down essential cooling >15 mins in Category 1 Building Network Equipment space	3	Yes		X	X		YELLOW
• Conduit/Wiring outside of equipment areas	1	No	X				GREEN

Planned Activity	Risk Factor	MOP Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	10:00 PM to 6am	Installation Monitoring Require-ment
• OVER WORKING SWITCHING EQUIPMENT				X	X		YELLOW
• OVER WORKING SWITCHING EQUIPMENT <u>Spaces after rigid protection has been installed</u>	2	Yes					
			X				GREEN
	1	No					
• Boiler/heating systems- NON CATEGORY 1 LOCATIONS	1	No	X				GREEN
• Boiler/heating systems- with impact Category 1 Building Network Equip-ment space	3	YES		X	X		YELLOW
• Carpet, tile or raised floor systems	1	No	X				GREEN
• Work on tiles in aisles of working equipment.	1	Yes		X	X		GREEN

NOTES:

1. Alternate Cooling System = capability of maintaining required environmental parameters.

2.   Any planned activity that involves the usage of chemicals must have a Material Safety Data Sheet attached to the SMOP.

4.8.2. Table 4.37 Alarms

Planned Activity	Risk Factor	NE Req'd	No TIME Restriction	Anytime Weekends	5pm to 6am	5pm to 6am	Installation Monitoring Requirement
Alarms System Installation/ DDC/Security							
Running cable, mounting nodes	1	No	X				**GREEN**
Running cable, mounting nodes <u>over Network Equipment</u>	2	Yes			X		**YELLOW**
Running cable, mounting nodes <u>over Network Equipment Spaces After rigid protection has been installed</u>	1	No	No				**GREEN**
Discrete alarm wiring to monitored equipment if equipment is actively supporting service removing power or essential cooling >15 mins with potential to impact service	1	Yes			X		**GREEN**
Alarm verification - testing not involving disabling critical equipment	1	No	X				**GREEN**

Table 4.38 Fuel Tanks and Piping:

Note- CA only: There are very specific California Consent Judgment requirements for determining the need for repair permits, for securing those permits, and for completing repairs within very specific timeframes as required by the CJ or by the regulatory authorities. At no time, would it be acceptable for the securing of a CHANGE RECORD/SMOP or for CHANGE RECORD/SMOP conditions to cause a delay that would impact compliance of CJ sites. Notification to the appropriate NOC and local Network management will take place.

Planned Activity	Risk Factor	NE Req'd	No TIME Restriction	Anytime Weekends	6pm to 6am	10pm to 6am	Installation Monitoring Require- ment
Repairs to Tanks							
Repairs to tanks and piping when multiple tanks exists and there is common feed to engines and only one tank will be worked at a time	1	NO	NO				**GREEN**
Installation of tanks and pip- ing when portable generators are on line and capable of car- rying critical load	1	NO	NO				**GREEN**
Repairs to tanks and piping when there is only one tank and fuel supply to engines will be blocked <60 Minutes	2	YES	NO				**YELLOW**
Repairs to tanks and piping when there is only one tank and fuel supply to engines will be blocked >60 Minutes	4	YES		X	X		**RED**
Repairs to tanks and piping when there is only one tank and fuel supply to engines will be blocked >60 Minutes and a by pass fuel supply sys- tem is used	2	YES	NO				**GREEN**
Repairs to peripheral equip- ment ie Veeder Root, sen- sors, that does not impede the ability to provide fuel to the engines	1	NO	NO				**GREEN**
Repairs to fuel systems that require breaking concrete or asphalt and utility locates	4	YES	NO				**RED**
Tank/System Testing and Maintenance							
Testing of UST/AST piping and monitoring systems that	1	NO	NO				**GREEN**

Planned Activity	Risk Factor	NE Req'd	No TIME Restriction	Anytime Weekends	6pm to 6am	10pm to 6am	Installation Monitoring Require- ment
does not impede or prevent fuel supply to engines							
Testing of UST/AST piping and monitoring systems when supply/return piping is to be disconnected beyond a 'safe' period for battery back-up and a bypass system can-not be used.	4	YES		X	X		**RED**

5. Environment, Health & Safety

5.1. Introduction

This section provides information pertaining to AT&T's Environment, Health and Safety compliance programs. These programs outline applicable regulatory requirements and processes associated with maintaining compliance, including the responsibilities of supervisors and employees.

AT&T is committed to providing a safe and healthful workplace for its employees and protecting the environment in the communities in which it conducts operations. All personnel must be aware of and must comply with the Company's policies in this area, including implementation of EH&S compliance programs and preparedness for managing EH&S emergencies.

The Ask Yourself Program enables network reliability by addressing basic environmental, health and safety requirements. Pertinent EH&S topics are summarized below and include references on where to obtain more detailed information.

5.2. EH&S Policy

The AT&T EH&S policy, vision, goals & guidelines are outlined on the EH&S web site at http://www.ehs.att.com , then select 'Who We Are'.

5.3. Responsibilities

5.3.1. Employee's Responsibility

Each employee is responsible for following all work practices designed to promote occupational safety and health and to protect the environment. This responsibility includes (but is not limited to) the following activities:

• Attend all training sessions as directed,

• Perform all work functions in accordance with instructions,

• Use appropriate personal protective equipment when required,

• Report hazardous conditions encountered in the workplace,

• Accurately report details of accidents and injuries, and

• Use only approved tools and equipment.

5.3.2. Supervisor's Responsibility

Each supervisor is responsible for ensuring that all work practices designed to promote occupational safety and health and to protect the environment are in place and communicated to all employees. This responsibility includes, but is not limited to, the following activities:

• Provide and properly maintain personal protective equipment as required,

• Ensure direct reports complete required safety and health-related training appropriate for their job function

• Ensure the completion of EH&S compliance routines,

• Maintain site compliance records, and

• Respond appropriately to hazardous conditions as reported by employees

5.3.3. EH&S Responsibility

EH&S is responsible for:

• Development, implementation and management of regulatory compliance programs,

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- Partnering with Operating Units to implement WORKSAFE-WORKGREEN plans to facilitate compliance,

- Completion of EH&S regulatory filings,

- Response and management of EH&S emergencies, and

- Assessing EH&S compliance to ensure program effectiveness and leveraging process improvement opportunities to minimize EH&S liabilities.

5.4. EH&S Hotline

Call 1-800-KNOW EHS (800-566-9347) for Environment, Health & Safety Support:

Prompt 1 - Emergencies, Regulatory Inspections and MSDS sheets
Prompt 2 - General environmental inquiries

Prompt 3 - General health and safety inquiries
Prompt 4 - Hazardous waste and regulated materials management
Prompt 5 - Reporting automobile accident claims and non-employee injuries (managed by AT&T Risk Management)
Prompt 6 - EH&S Training

Prompt 7 - Reporting job-related illness or injury

For more information on how to contact EH&S, see the following link:

https://spsf04.web.att.com/sites/EHS/WEB/natt/contactus.aspx

5.4.1. Emergencies Reporting

Certain emergencies must immediately be reported to the EH&S Hotline at 800-566-9347, prompt 1. This includes hospitalizations, fatalities, chemical spills and releases, and compliance inspections.

A tool is available for guidance on how to respond to inspections by OSHA, USEPA, or state or local officials by following the guidelines outlined at https://spsf04.web.att.com/sites/EHS/WEB/natt/osha_insp.aspx

The Operating Unit shall be responsible for notifying EH&S by calling 800-566-9347, prompt 1 as soon as it is made aware of a government agency inspection regarding compliance with EH&S Law. If the subject of the inspection is a portion or aspect of the property that the Operating Unit is responsible for managing, then the Operating Unit may assume the role of manager and escort the compliance officer during the inspection. The Operating Unit must also immediately notify EH&S should it receive a Notice of Non-compliance, Notice of Violation or Allegation of Hazard (OSHA complaint). The Operating Unit must consult with and obtain the concurrence of AT&T EH&S and Legal Support before responding in writing or otherwise, to any such notice.

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5.5. EH&S Assessments

The Operating Unit must cooperate with any Company-sponsored assessment of EH&S compliance, including the inspection of selected Properties, and interviewing employees and contractors. Cooperation includes the completion of workplace observations, collaborating in the scheduling of and participation in inspections, agreeing to a reasonable schedule for closing findings identified as needing improvement, and providing status reports per the AT&T EH&S Assessment Process.

5.6. WMS Routines

To ensure that the Operating Unit assigns to each Property the WMS routines necessary to support compliance with EH&S Law, the Operating Unit must consult with EH&S (Field Support Team), including providing the latter with a complete infrastructure profile for the Property.

5.7. EH&S Programs

5.7.1. Environment

5.7.1.1. Air emissions permits

When stationary or portable emergency engines, boilers or other fuel burning equipment, is to be installed, modified, or removed, under applicable law a registration or permit may be required or may have to be updated. Consult and involve AT&T EH&S, such as by calling 800-566-9347, prompt 2, (a) as early as possible in the planning stages of each such project and (b) in the subsequent submission of air permit applications, including receipt of documents related to all installations or modifications of fuel burning equipment. The Design & Construction organization notifies EH&S of fuel burning equipment using the PMA process. EH&S will respond to related agency requests, pay the necessary fees, and maintain the required documentation. The Operating Unit is also responsible for operating the source in compliance with EH&S law, including any applicable permit conditions. It is also important to contact EH&S as soon as possible when any changes are needed to an existing permit.

5.7.1.2. DOT Hazardous Materials Transportation

The Department of Transportation regulates the shipments of hazardous materials, including hazardous wastes. Small amounts of hazardous material needed for performing work may be transported in company vehicles under the 'Materials of Trade' provisions. A letter describing what is allowed as materials of trade can be found on the Hazardous Wastes and Regulated Materials web site at https://spsf04.web.att.com/sites/EHS/WEB/PT/site/HazRegMatWasMan.aspx

Hazardous materials that do not meet the materials of trade provisions must be transported in compliance with DOT requirements. EH&S must be contacted at 800-566-9347, prompt 4 for consultation when considering the transport of hazardous materials, and prior to making any arrangements to do so with carriers. As part of these regulations, only

trained workers may sign shipping papers. Contractual provisions may provide for vendors to sign shipping papers on behalf of AT&T. In this scenario, the vendor will be required to ensure all applicable transportation regulations are complied with including DOT HazMat, RCRA, and RCRA universal waste training. AT&T employees should never agree to sign hazardous materials bills of lading or hazardous waste manifests unless they have successfully completed the 'DOT HM126F/181 Hazardous Materials Transportation' training class.

5.7.1.3. EPCRA Compliance (EH&S Inventory Management System)

Owners and operators of facilities who store and use certain hazardous materials are required by the Emergency Planning and Community Right-to-Know Act (a/k/a 'EPCRA' or 'SARA Title III') to complete annual filings pertaining to the chemicals on site. Operating Units must ensure that chemical inventories are current in EH&S Compliance Data Management System 'Inventory Management System(IMS)' website or other database of record. This data is used to maintain data on tanks, batteries, and other hazardous materials for which the Operating Unit has management responsibility. The Operating Unit is responsible for annual certification of site hazardous materials inventories in the applicable database(s) of record. AT&T EH&S completes all EPCRA filings and pays all associated fees. EPCRA filings include Tier II forms, Hazardous Materials Business Plans (HMBP - CA only) and Risk Management Plans (NYC only).

5.7.1.4. Fuel Storage Tank Operations & Maintenance

The inspection and monitoring of fuel storage tanks, including operations and maintenance activities should be coordinated through the EH&S National Tank Team by calling the EH&S Control Center at 800-566-9347, prompt 2 'Environmental Inquiries', and then prompt 1 'Storage Tank and SPCC Plans'.

All tank alarms, compliance inspections and spills or release must be immediately called into the EH&S Hotline at 800-566-9347, prompt 1.

5.7.1.5. Fuel Storage Tank Permitting, Installation and Removal

Fuel storage tank construction activities are managed through a partnership process between the Design and Construction and EH&S organizations. All fuel storage tank construction work must be coordinated by the responsible Design & Construction organization to ensure that proper permits are obtained and other related compliance matters are managed.

5.7.1.6. Real Estate (Due Diligence)

An important initial step in site acquisition is a Phase I Environmental Site Assessment (ESA). A Phase I attempts to satisfy the "due diligence" requirements of a property transaction, typically using ASTM guidelines. It is intended to identify potential environmental conditions associated with a particular property being bought.

A typical Phase I survey includes:

- A physical survey of the property and surrounding properties to assess general land use of the area;

- An on-site visual inspection of the site to identify recognized environmental conditions.

- A review of data regarding the local geology and hydrology;

- An assessment of current and past uses and practices of the property (particularly identifying and assessing hazardous material issues).

- An assessment of the historic land use and development of the property through review of fire insurance maps, city directories, aerial photographs of the site, and interviews with persons knowledgeable of the site history.

- A review of regulatory agency records specifically associated with the location.

- A written report of all findings including recommendations and conclusions.

For the most part, a Phase II ESA is a result of recommendations made in the Phase I ESA report. They provide a more comprehensive and detailed review of the facility; further evaluating suspected environmental conditions and the extent contamination. Sampling is conducted during a Phase II, which attempts to qualitatively assess environmental issues and liabilities.

For assistance with the EH&S aspects of real estate transactions, please call 800-566-9347, prompt 2 'Environmental Inquiries', and then prompt 2 'Property Transactions and Remediation'.

5.7.1.7. Remediation & Superfund (Contaminated soil or groundwater)

For investigation or remediation of soil or groundwater that may be contaminated, AT&T has contracted with a number of qualified remediation consultants and contractors. When such work is required, in response to government demand or otherwise, The Operating Unit should contact the EH&S Hotline at 800-566-9347, prompt 2 'Environmental Inquiries', and then prompt 2 'Property Transactions and Remediation' and after consultation with EH&S should prepare a brief summary describing the work.

5.7.1.8. Small Spill Cleanup

All locations that store and use batteries, fuel oil and other chemicals must have an appropriate spill kit available to manage small chemical spills. AT&T Practice EHS-1200-PRC Small Spill Response and Clean-up Practice includes instructions on how to plan for spills, evaluate and respond to various types of spills, and spill kit ordering information. Employees who are authorized to clean up small spills must complete training as prescribed in the EH&S Training Matrices. Employees should never attempt to perform cleanup tasks that are outside the scope of this training. Call the EH&S Hotline at 800-566-9347, prompt 1 when assistance is needed with response to and cleanup of a chemical spill.

5.7.1.9. Spill Prevention Control and Countermeasures Plans (SPCC Plans)

Certain fuel storage tank installations are subject to federal requirements to establish and maintain an SPCC Plan. For guidance in compliance with federal rules regarding Spill Prevention Control and Countermeasures ('SPCC') Plans, including whether a plan is required, preparation of an SPCC plan, on-site personnel training, and placement of a spill kit. Contact EHS by calling 800-566-9347, prompt 2 Environmental Inquiries, and then prompt 1 'Storage Tank and SPCC Plans'. Employees who are authorized to respond to spills at SPCC Plan locations must complete the training outlined in the applicable EH&S Training Matrices.

5.7.1.10. Waste Management & Resource Recovery

All hazardous waste, universal waste and state regulated waste must be managed through the EH&S Resource Recovery Center (RRC). Before disposing of wastes (hazardous, universal or otherwise regulated), scrap, equipment, or other materials, check the information and follow the processes outlined at https://spsf04.web.att.com/sites/EHS/WEB/PT/site/RecRecCen.aspx

Waste disposal requests can be initiated by:

1.   Submitting an on-line request through the https://cdms.web.att.com/WTS/Default.aspx ; or

2.   Contacting the RRC on 1-800-566-9347, prompt 4.

5.7.1.11. Water (Wastewater discharges)

As soon as possible before the installation, removal, change in service, or modification of any equipment that discharges wastewater (whether to surface water, ground water, the storm water collection system, or the sanitary sewer system), the Operating Unit shall contact EH&S at 800-566-9347, prompt 2 Environmental Inquiries, and then prompt 3 'Water Management Issues' and provide details. Some examples of wastewater generated at Company facilities include non-contact cooling water, process wastewater, sanitary sewage, and storm water runoff from construction activities. EH&S will assist with identifying whether any permits must be obtained or modified based on such plans, and for seeking same.

5.7.2. Occupational Health

5.7.2.1.

5.7.2.1.1. Asbestos Management-

EPA and OSHA regulations require that building owners survey suspect asbestos containing building materials prior to renovation or construction activities. Records for asbestos containing materials that have been identified or abated must

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be maintained. This survey may not be required, provided the building owner has knowledge (via building specs and existing prints) that no asbestos-containing materials (ACM) were used.

If the building may contain suspect asbestos containing materials, federal law requires that the areas planned for renovation and construction be surveyed prior to being disturbed in order to prevent the release of asbestos fibers.

AT&T has contracted with a number of qualified consultants and contractors that perform asbestos, lead, and mold abatement work listed in the AT&T Buys web site under 'Asbestos Abatement'. The responsible property management or real estate group should arrange for asbestos abatement activities. Contact EH&S by calling 800-566-9347, prompt 2 for consultation relative to asbestos issues, including conducting asbestos assessments and assistance with developing a scope of work for abatement.

5.7.2.2. Ergonomics

Office ergonomics are important, particularly in work positions where employees sit for 6 or more hours per day or use a VDT 4 or more hours per day. As part of the planning process for any activity that may change the workstation environment (including changes to cubicle size, the desk, chair, keyboard or monitor configuration; changes affecting overhead lighting; or changes affecting acoustical materials such as workstation panels or ceiling tiles), review and comply with the AT&T Ergonomics Furniture Guidelines. Employees who fall into this category are expected to be offered ergonomics training and should be provided a chair that includes the following features: pneumatic height adjustment, backrest angle adjustment, lumbar support and tension adjustment. Additional features may be necessary in special circumstances. Employees expected to use a laptop computer should be provided with external peripheral equipment. At a minimum this equipment should include a keyboard and a mouse. Additional information can be found at: http://www.ehs.att.com/cdms/ ,

5.7.2.3. First Aid Kits

First aid kits must be readily available and easily accessible to all personnel. Company motor vehicles must also be equipped with first aid kits. Information associated with first aid kit inspection, maintenance and ordering can be found at http://www.ehs.att.com/ps/first_aid.htm

5.7.2.4. Hazard Communication -

When compliance is required with OSHA's Hazard Communication standard, use AT&T Practice 770-000-033 'Hazard Communication' as the site written program and complete the training prescribed in the EH&S Training Matrices. The AT&T On-line MSDS System can be accessed from the EH&S web site at http:/www.ehs.att.com to view, print or download copies of MSDSs. MSDSs can also be obtained via fax by calling the EH&S Hotline at 800-566-9347, prompt 1.

5.7.2.5. Hazardous Waste Operations & Emergency Response

Emergency responders and those who perform work at hazardous waste sites are required to be trained at the appropriate level for the type of work they perform per the OSHA HAZWOPER standard. These requirements pertain to those Network Disaster Recovery workers who participate on the Special Operations Team and Hazardous Materials Team.

5.7.2.6. Homeland Security -

Biological and chemical attacks are a criminal matter and therefore shall immediately be reported to AT&T Code of Business Conduct (COBC) at the 24/7 Hotline telephone at 888-872-2622 prompt 1. Asset Protection will coordinate the appropriate course of action(s) with local law enforcement and other AT&T support organizations.

5.7.2.7. Job Hazard Assessment & PPE

OSHA requires employers to complete and document hazard assessments that identify potential hazards associated with the work performed. AT&T job hazard assessments (JHAs) are maintained on-line at **http://www.ehs.att.com/cdms/** This on-line system contains valuable information on job tasks, including potential hazards, compliance training, and the personal protective equipment prescribed for the task. Job tasks are also linked to work groups to allow for a variety of reports. The website includes the PPE source pages, which provide additional information on proper use, maintenance, and storage; specifications; including suppliers and ordering information. For additional information regarding PPE and job hazard assessments, contact the AT&T EH&S Hotline at 800-566-9347, and select prompt 3.

5.7.2.8.

Personnel planning renovation and construction activities that will disturb painted surfaces need to understand if there is any historical knowledge or other indications that paint could be lead containing. Surfaces must be tested for lead paint if there is a potential for lead paint to be present. Paint that tests greater than 0.5% or 1 mg/cm2, lead content is considered lead paint and shall be managed per state and federal regulations. AT&T has contracted with a number of qualified consultants and contractors that perform asbestos, lead, and mold abatement work'. Contact EHS at 800-566-9347, prompt 3 for consultation relative to lead paint issues, including conducting lead paint assessments and assistance with developing a scope of work for abatement.

5.7.2.9. Mold

Mold growth in buildings generally occurs because of moisture problems that have not been addressed. Some materials tend to absorb and hold water more than others. As a rule, materials that are wet and cannot be thoroughly cleaned and dried should be discarded, as they can remain a source of microbial growth. It may be possible to dry out and save certain building materials (for example, wallboard, fiberglass insulation, and wall-to-wall carpeting that were soaked only with clean rain water). However, removing and replacing them may help prevent indoor air quality problems. Because they take a long time to dry, they may be a source of microbial growth. Fiberboard, fibrous insulation, and disposable filters should be replaced, if they are present in the HVAC system and have been in contact with water. Due diligence is vital when considering how rapidly mold can grow on water damaged materials or standing water. Mold growth in buildings is based on one simple rule: **moisture and water incursion must be prevented.**

For sampling and/or abatement of mold in air, on surfaces, or otherwise, AT&T has contracted with a number of qualified consultants and contractors that perform asbestos, lead and mold abatement work, listed in the AT&T Buys web site under 'Asbestos Abatement'. The responsible property management or real estate group should arrange for mold abatement activities. Contact EHS at 800-566-9347, prompt 3 for consultation relative to mold issues, including conducting mold assessments and assistance with developing a scope of work for abatement.

5.7.2.10. Noise & Hearing Conservation -

OSHA regulations require employees working in high noise areas (i.e. those areas where the time weighted average noise exposure exceeds 85 dBA) to be placed in a hearing conservation program. This program must be in writing and specific to the affected location. The program also must describe provisions made to comply with the requirements for annual audiograms (hearing tests), training and hearing protection for workers. Contact EH&S at 800-566-9347, prompt 3 to arrange for noise monitoring and for assistance with establishing a written hearing conservation program when required at the location.

5.7.2.11. Respiratory Protection

Respirators are normally not required for the job tasks performed by AT&T employees, however, when a respirator is required, a written respiratory protection program is required. This program must be in writing and specific to the affected location. The program also must describe provisions made to comply with the requirements for occupational examinations, annual fit testing & training and hazard assessments to determine the respirator type authorized for use. Contact EH&S at 800-566-9347, prompt 3 to arrange for respirator training and for assistance with establishing a written respiratory protection program when required at the location.

5.7.3. Radiation Safety

5.7.3.1. Ionizing Radiation -

AT&T Business Units and Contracted Business Partners must establish, maintain and manage accountability of AT&T-owned [ionizing] radiation sources used or stored at AT&T locations, using the **Radiation Source Inventory Management (RSIM)** , at http://www.ehs.att.com/cdms/ , module within the EH&S Inventory Management System (IMS). Ionizing radiation sources include radioactive materials, such as ionization smoke detectors or self-luminous (tritium) exit signs, and x-ray producing machines. Related practices and other applicable resource links are provided at the following website: http://www.ehs.att.com/ps/radiation.htm

- **Generally Licensed Products** - Self-luminous (tritium) exit signs and certain ionization smoke detectors contain a controllable amount (small quantity) of radioactive material that is regulated by the Nuclear Regulatory Commission (NRC). Although such products are considered safe for use, specific requirements do apply for maintaining (installed or stored) or disposing such products. Property managers or facility engineers whose job duties require inventory maintenance or routine inspection of products and/or instruments containing a licensable quantity of radioactive

material (RAM) such as self-luminous light sources (e.g., tritium exit signs) can obtain guidance from 'EHS-2900-JBA-2 Radiation Source Inventory Management (RSIM) System' Job Aid

- **X-ray-producing equipment** - X-ray producing equipment (such as postal inspection machines, industrial and medical systems, and analytical devices such as electron microscopes, x-ray fluorescence, and x-ray diffraction machines) may be subject to administrative requirements in some states. Prior to purchasing or leasing an x-ray system, the responsible AT&T site or project supervisor should notify the AT&T EH&S Radiation Safety Officer by contacting the AT&T EH&S Hotline at 800-566-9347, prompt 3.

5.7.3.2. Non-ionizing Radiation

Laser Radiation - Laser-emitting devices used in construction or renovation activities, such as alignment/leveling aids, and optical fiber communication systems (OFCS) require basic user precautions to minimize incidental exposure to the beam. Users (i.e, contractors, AT&T employees and business partners) must follow the manufacturer's operating instructions and apply appropriate protective (control) measures related to the laser hazard class. Web-based laser safety training is available and must be completed as prescribed in the EH&S Training Matrices.

- **RF Microwave-** RF exposure and safety concerns need to be considered when servicing, installing or working in close proximity to an actively transmitting antenna. In situations were RF levels may exceed the applicable FCC exposure limits, appropriate work precautions are necessary to control personnel exposure. Such precautions may include, for example: maintaining prescribed 'stand-off' or 'keep-clear' distances from the transmitting antenna (3-ft or greater, depending on the transmitter); power reductions or termination; or use of appropriate RF personal monitors. Additional information can be found on the EH&S web site at http://www.ehs.att.com/cdms/

5.7.4. Safety

5.7.4.1. DOT Commercial Motor Vehicles

A DOT regulated commercial motor vehicle is defined as any vehicle that exceeds 10,000 pounds either as a single unit or when combined with a trailer. It is both the supervisor's and the driver's responsibility to insure that drivers are operating in compliance with all DOT/FMCS Regulations. Driver qualification files are kept for all DOT drivers and a drivers list is maintained in the DOTTS database. DOT drivers also must pass an occupational physical examination and complete training.

5.7.4.2. Confined Space

OSHA requires employers to evaluate each worksite to determine if any permit-required confined spaces exist. A confined space is a space that has limited means of entry or exit, is large enough for a worker to enter completely and perform a given task, and is not designed for continuous human occupancy. A permit-required confined space is one that meets

the definition of a confined space and has a hazard that could prevent the employee from leaving the space. If AT&T employees are required to enter permit-required confined spaces, a written program must be developed. The AT&T Environment, Health and Safety Organization (EH&S) can provide assistance in evaluating the worksite and developing a written Permit-Required Confined Space Program.

5.7.4.3. Cranes, Hoists & Rigging Equipment

The requirements for crane and hoisting operations must be clearly defined and appropriate precautions must be taken. These precautions include proper preplanning, care, attention to detail, and teamwork on the part of trained operators/ riggers, along with the use of equipment that is reliable, properly designed, inspected and maintained. Implementation of crane and hoist requirements and recommendations will dramatically strengthen hoisting and rigging programs, with the goal of decreasing the probability of serious incidents resulting in personnel injury, death, or severe property damage.

5.7.4.4. Electrical Safety

Employees must ensure that necessary safeguards are taken while working on or around electrical systems and equipment. Where necessary, local management shall develop written procedures (see Lockout/Tagout below). In all cases, the manufacturer's instructions regarding safety precautions for each specific piece of equipment being worked on should be reviewed prior to starting any work. Only authorized persons who have been properly trained are allowed to work on energized electrical equipment.

5.7.4.5. Fall Protection

When working within 6 feet of an unprotected edge where there is 4 feet or more to the next lower level fall protection equipment and procedures must be followed. This is accomplished by the use of a full body harness, lanyards and adequate anchorage points. Any employees using fall protection equipment must complete training in the proper use and inspection of this equipment, as outlined in the EH&S Training Matrices.

5.7.4.6. General Building and Office Safety

Keeping your office and workspace free of hazards is important, not only for appearances sake, but for the safety of you and others. To avoid the dangers of improper storage in the workplace, please follow these guidelines:

• Do not stockpile office supplies. An over-abundance of items can make storage unsafe.

• Stack boxes in straight columns, with the largest on the bottom.

• When placing items on multiple shelves or in file cabinets, try to place the heaviest items on the bottom shelf/drawer to create a lower center of gravity and to reduce the likelihood of the shelf/cabinet from falling over. If the shelves are well secured you may place the heaviest items at waist level to minimize lifting effort.

• When retrieving supplies from storage, do not twist or stretch your body.

Keep aisles clear; place wastebaskets and boxes where they don't present tripping hazards. Telephone, computer and other wiring may not be placed in walkways.

More information on the Office Safety program can be found at http://www.ehs.att.com/ps/officesafety

5.7.4.7. Illness / Injury Reporting & Investigation

Within 24 hours of the first notice or first knowledge of an on-the-job injury/illness, report the injury to the AT&T Integrated Disability Service Centers as administered by the Sedgwick CMS at 1-866-276-2278. For more detailed information, please click on the following link: https://intra.att.com/risk/docs/Claim Reporting.doc

The Operating Unit is responsible for the annual printing and posting the OSHA 300A - Summary of Work-Related Injuries/ Illnesses as required by OSHA regulations. In addition, the Operating Unit must immediately call 800-566-9347, prompt 1 when it has knowledge of information that AT&T is obliged to report to OSHA (such as a fatality or 'catastrophe' as defined by OSHA rules). Non-Company employee injuries should be reported to Risk Management (by calling 800-566-9347, prompt 5).

5.7.4.8. Ladder Safety

Ladders must always be used with caution since falls from any height can cause serious injury. Ladder safety involves the use of proper procedures when preparing to work, climbing and descending a ladder, working while on a ladder, when moving a ladder, and when assisting someone else on a ladder. The Manager is responsible for ensuring that employees complete training that will familiarize them with safe ladder practices and pre-use visual ladder inspection procedures, as prescribed in the EH&S Training Matrices.

5.7.4.9. Lockout / Tagout (LOTO)

Lockout / Tagout is a program that is intended to prevent injury by eliminating unintentional operation or release of stored energy within machinery or processes during set-up, start-up, or maintenance repairs. LOTO procedures can be created, reviewed, updated, or printed from the Lockout / Tagout System. When OSHA LOTO requirements apply, create update and implement a LOTO Plan as required, using the checklist, template, practice and process provided at http://www.ehs.att.com/cdms/ . The Operating Unit is responsible for certification and maintenance of equipment-specific hazardous energy control procedures on the LOTO website.

5.7.4.10. Machines, Tools, Etc

Types of guarding: One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods include barrier guards, two-hand tripping devices, electronic

safety devices, and shields. Guards shall be affixed to the machine and shall be such that it does not offer an accident hazard in itself.

Hand Tools: Each employer shall be responsible for the safe condition of tools and equipment used by employees, including tools and equipment that may be furnished by employees. Hand tools used by employees shall be maintained in safe operating condition. Hand-held portable electric tools shall be equipped with switches that must be manually held in a closed position to operate the tool.

5.7.4.11. Powered Industrial Vehicles

All new powered industrial trucks acquired and used by an employer shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1-1969", which is incorporated by reference as specified in Sec. 1910.6, except for vehicles intended primarily for earth moving or over-the-road hauling. Approved trucks shall bear a label or some other identifying mark indicating approval by the testing laboratory. Powered industrial vehicle modifications and/or additions that affect capacity and safe operation shall not be made without manufacturer's prior written approval. Battery charging installations shall be located in areas designated for that purpose. Prior to permitting an employee to operate a powered industrial truck, the employer shall ensure that each operator has demonstrated competency by successfully completing the training and practical evaluation as required.

5.7.4.12. Tower Safety

Any employees whose job it is to climb towers to perform their job must complete the AT&T Tower Fall Protection and Rescue Training Program. This training is to be taken by all employees who have to climb towers at any time and for any reason, even if it is just to repair a strobe light bulb.

6. Security

6.1. Introduction

This section provides information on two important types of security issues: network security handled by the AT&T Computer Security Incident Response Team (A-CSIRT) and the protection of AT&T proprietary information, handled by AT&T Asset Protection.

Continuous and secure network services are critical to AT&T and its customers. To ensure that service remains reliable, it is important that everyone whose work affects the performance of the Network be familiar with ways to maintain appropriate levels of security and respond to security violations. Security guidelines to help you remain aware of security issues are provided in this section. References to documents that spell out security policies in greater detail are given, and telephone numbers to call with questions or emergencies are provided.

6.2. AT&T's Security Policy

6.2.1. AT&T's Computer Security Incident Response Team (A-CSIRT)

The A-CSIRT team will support Computer and Network Anomalies. This includes but in not limited to Denial of Service attacks, computer and network security anomalies. Issues of this nature should be reported to the AT&T Network Security 24 Hour Emergency Hotline 1866-466-2288, prompt 8 (US).

To obtain additional supporting information for A-CSIRT, you may visit the

A-CSIRT Home Page http://acsirt.cso.att.com

6.2.2. AT&T's Asset Protection

AT&T Asset Protection Client Services will handle violations or suspected violations of the Code of Business Conduct, to report any assault, theft, fraud or malicious damage to company personnel or property. AT&T Asset Protection is supported (24/7) at 1-888-871-2622, Option #1

To obtain addition supporting information visit AT&T Asset Protection's Home Page https://spsf05.web.att.com/sites/AssetProtection/APO/Home.aspx

AT&T Asset Protection is supported by AT&T Corporate Real Estate who has responsibility for the management of building access control and issuance of employee identification cards. Specific requirements and detailed information can be located at;

https://spfd01.web.att.com/sites/CRE/buildingsecurity/default.aspx

6.3. AT&T Security Intent

AT&T Security strives to protect shareholders, employees and customers interests from unauthorized access and/or compromise by securing:

•   People

•   Networks/Systems

      ◦   Services

      ◦   Revenue

　　° 　　Information

6.4. AT&T Security Structure

For General Security Inquiries visit the website at; http://cso.att.com/

7. Global Network Field Operations (GNFO) - Work Priority

7.1. Purpose and Scope

Global Network Field Operations (GNFO) has adopted a consistent set of work priorities to assist the organization in achieving its mission. This represents the collection of work priorities formerly the Process Integration Forum (PIF). The list is the GNFO Champions base set of priorities those personnel in GNFO should use in the performance of their daily duties.

The primary purpose of this document is to communicate to the organization the initial set of work priorities.

7.2. Purpose of Work Priorities

Global Network Field Operations (GNFO) established this set of work priorities to achieve three (3) key business objectives:

1.　Provide assistance to personnel in making day to day decisions in the performance of their work.

2.　Provide a sense of direction to the organization for the deployment of financial resources to the various business activities.

3.　Provide assistance to personnel in resolving conflicts across work activities.

The establishment of these priorities *does not indicate* that lower priority work is not important. All personnel should attempt to complete all delivered work to the best of his/her abilities given available resources, training and support. This document is not intended to be a rule book, but, rather, a set of principles for an experienced, skilled and empowered organization.

7.3. Roles and Responsibilities

Personnel in Global Network Field Operations (GNFO) have the following roles and responsibilities associated with the Work Priorities:

1. Be knowledgeable of the work priorities.

2. Perform work consistent with the work priorities.

3. Provide feedback to the Document Owner for recommendations for changes to the work priorities.

4. Complete all work in all priorities to the best of their abilities.

5. Provide feedback to people requesting work and partnering organizations if a due date will be missed.

6. Adherence to policies involving cell phone usage. All cell phone usage is restricted in central office equipment areas. Reference is: ATT-TELCO-002-200-354.

7.4. Work Priorities and Supporting Information

GNFO Work Prioritization at the Execution Level.

7.4.1. Critical Health and Safety

Associated Work Items: This category includes *emergency* activities with regard to safety hazard mitigation, safety or environmental problem resolution, physical office security, activities to prevent injury or harm to employees, or to prevent immediate harm to network buildings or equipment. This category includes resolution of alarm system failures, reaction to fire or smoke alarms, handling of bomb threats, correction of unsafe conditions. It also includes work to protect buildings or employees from natural disasters, including earthquakes, floods, and tornadoes.

Notes Associated with this Priority: This priority is intended to support problem resolution or correction. In addition to the work items listed in this priority, it is expected that every work item in every priority have a safety and environmental element included to ensure that continuous measures are taken to protect employees and plant.

7.4.2. Repair/Restore

Associated Work Items: This category includes demand maintenance or restoration of failed customer service or capacity for service. It also includes all duplex failures, simplex failures, failed elements causing customer service interruptions, repair or restoration of critical infrastructure elements (such as air conditioning for equipment spaces), repair or restoration by re-provisioning and test assist (maintenance) in order to meet AT&T network reliability goals and objectives.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself guidelines.

Special Considerations: Some failed elements may require repair or postponement due to risk to other customer services. Such a delay should be in agreement with Control Centers, appropriate process delegates, Service Method of Procedures (SMOP)/ Change Records, Network Event guidelines and other protection means to ensure network reliability.

7.4.3. Service Orders

Associated Work Items: This category includes revenue-impacting service order or capacity installa-tion, all customer-driven service orders, network infrastructure build, Network Capacity Planning and Delivery (NCP&D) equipment installation activities to meet customer dates, critical feature installation to meet customer dates and installations. It, also, includes collocation space arrangements including; License Space Arrangement (LSA), Customer provided Access (CPA) and vendor requests.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, Service Method of Procedures (SMOP)/Change Records, Network Event guidelines and other protection means to ensure network reliability.

Special Considerations: General capacity installations are normally not included in this priority. This priority is reserved for short term, customer-driven critical installations.

7.4.4. Critical Preventive Maintenance Activities

Associated Work Items: This category includes non-deferrable network preventive maintenance activities including routines that must be performed to ensure network reliability or safety. Examples include alarm checks, walk-throughs, critical back-ups, vehicle safety checks, battery reading updates, safety and code items, participation in disaster recovery exercises, and tool and equipment checks.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, SMOPs, Network Event guidelines and other protection means to ensure network reliability.

Special Considerations: Preventive maintenance work should not be deferred if there is a reasonable risk that non-conformance can likely lead to equipment failure, inability to restore or equipment damage or personal harm.

7.4.5. Network Growth

Associated Work Items: This category includes general capacity augmentation or project work. This work is generally performed in compliance with Network Capacity Planning and Delivery (NCP&D) 'Capacity Priority List'. It includes facility augments, normal office growth, and prioritized projects. Work in this priority supports the planned evolution of the network and planned growth in capacity to serve customers and features.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, SMOPs, Network Event guidelines and other protection means to ensure network reliability.

7.4.6. Non-Critical Preventive Maintenance Activities

Associated Work Items: This includes normally scheduled preventive maintenance routines required because of management processes: non-critical EH&S routines, security system routines, computer preventive maintenance activities.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, SMOPs, Network Event guidelines and other protection means to ensure network reliability.

Special Considerations: While routines in this category may be deferred, they should be performed in a timeframe that supports the integrity of the routine.

7.4.7. Asset Management / Material Logistics

Associated Work Items: This includes inventory management work: PICS or eLOGIC, equipment inventories, protection of assets, packaging and shipping of circuit packs, database management, inventory clean-ups, engineering review of installed assets and material logistics management.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, SMOPs, Network Event guidelines and other protection means to ensure network reliability.

7.4.8. Projects

Associated Work Items: This category includes cost, reliability or environmental improvement projects including service and customer reconfigurations, POP reconfigurations, EH&S compliance projects, access improvement projects, office closing projects. The principle of this priority is to perform project work that is not directly in support of customer service or capacity augmentation but is performed to improve cost structure, asset utilization or ensure compliance.

Notes Associated with this Priority: All work around or close to equipment providing customer service is subject to network reliability principles of Ask Yourself, SMOPs, Network Event guidelines and other protection means to ensure network reliability.

7.4.9. Leadership/Direction Activities

Associated Work Items: This category includes day-to-day communications, priority setting, associate support and problem resolution. Includes Performance Management System, Performance Reviews, work team meetings, incident reviews, personnel support issues, communication broadcasts and understanding new business environment impacts.

7.4.10. Planning Activities

Associated Work Items: This includes planning work in support of network reliability issues: reliability reviews, contingency plan preparation, root cause analysis, SMOP and Network Event preparation, office certification and disaster recovery planning.

Special Considerations: The implementation of the various planning activities via SMOPs, Network Events and contingency planning is part of each executed plan's priority (i.e., using Network Events as a part of doing particular work).

7.4.11. Administrative Work

Associated Work Items: This category includes mandatory work items in support of management pro-cesses. This work includes time reporting, voucher and bill preparation, password management, office security issues, visitor support and office records management.

7.4.12. Training and Development

Associated Work Items: This category includes personnel training and development activities. This work includes skill training, interpersonal skill development, workshops, recognition systems, leadership training, first aid training, occupational training, on-the-job and formal training experiences as well as cross-training and long term developmental experiences.

Special Considerations: Problems with skills and capabilities may move this priority much higher, depending upon individual circumstances.

7.4.13. Leadership Programs

Associated Work Items: This category includes leadership programs introduced to provide direction, assistance, support or targeted communications to personnel. These programs include Quality Measurement Systems (QMS), Ask Yourself sessions, Six Sigma, ISO certification, Target Growth, process support and process training.

7.4.14. Deferrable, Generic Work

Associated Work Items: This includes office records management, drawing management, housekeeping, mail, general office maintenance, tool and vehicle management and maintenance (calibration, vehicle maintenance, and licenses), supplies, grounds maintenance and filing.

7.4.15. Optional Improvement Activities

Associated Work Items: This includes new process trials, work that is done on the basis of available resources.

Special Considerations: This category includes support for important work that requires available resources which are not tied up with other priorities. Careful consideration should be given to the appropriate assignment of the work.

8. Mobility Network Operations National & Regional Services

8.1. Introduction

This section of **Ask Yourself** covers the Mobility Network Operations National & Regional Network Services of Global Network Operations, and consists of the functional areas:

- National operations generally including text & data messaging, national data center (NDC) IP/security platforms, data services environment, external partners support/management, emerging applications and core network platforms (call processing & provisioning).

- Regional operations generally including cell sites, RAN network core, mobile switching center complexes, regional data serving gateways, market/regional core network infrastructure and E911 services

These groups are part of the AT&T Global Network Operations (GNO) business unit.

8.2. Service Protection - "Ask Yourself" Questions and Methodology

Our goal of striving for flawless Global Network Service and loyal customers can only be reached if each of us takes personal responsibility for our jobs and works to resolve uncertainties or problems. AT&T Global Network Operations believes the **"Ask Yourself"** methodology will explain how you can do your part to assure our goal is reached.

Please see Chapter 1, Section 1.2 of the **Ask Yourself Handbook** for the **"Ask Yourself"** Principals and Philosophy.

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8.2.1. Mobility Network Reliability Centers (NRC)

The Mobility NRCs are responsible for the overall management of the AT&T network services. These groups are responsible for all network connectivity and network elements servicing the mobility customer base. These NRCs will not normally interface with any external customers except on a NOC to NOC level. The NRCs will:

•   Provide fault management and change management of all the data networks

•   Provide fault management, root cause analysis, traffic management

•   Coordinate major failures via technical command and control

•   Provide proactive maintenance via system alarm structure

•   Ascertain specific customer impacts during failures

•   Set priorities for facility network and specific customer restoration

•   Coordinate facility restoration

•   Manage scheduled and unscheduled maintenance

•   Direct or execute repairs on network elements

•   Perform change control management

•   Support and, in some scenarios, manage network upgrades

•   Support new network features and services

•   Manage suppliers/vendor partners

•   Provide 7 X 24 service

8.3. General Guidelines for Planned Activities

The decision of when to perform a service should be based on the impact that a process failure can have on our customers, not on how well we can execute the change or the probability of process success. In addition, the impact of an unsuccessful execution of a planned activity on the Mobility network regardless of whether it is a routine operation should weigh into the decision

Approved changes that have the potential to affect the network as a whole or an entire element must only be performed only during the scheduled Maintenance Window.

8.3.1. General Work Schedule Guidelines

All planned system maintenance that may be service affecting must be performed within the maintenance window. The maintenance window shall be Monday through Sunday, from 12:00 AM (Midnight) until 6:00 AM. This window may be narrowed at the organization/markets discretion as usage patterns may create the need for a shorter interval. Any market modifications to this policy must be approved in writing by either the Vice President or Market Executive Director of Operations.

Any maintenance window activity performed on a platform that serves areas that span multiple time zones shall not commence until all time zones that could be affected have entered the maintenance window.

Examples of activities that would be scheduled to occur during the maintenance window include, but are not limited to:

- All software upgrades and patches.

- Any Major data translations or dialed digit analysis changes

- Any planned work or upgrade activities for adjunct systems (Ex: Voicemail, Synchronization, Transport (DACS) , etc)

- Cleanup, de-growth or de-commissioning of equipment (DACS, DSX, etc) that may contain live circuits (this includes breaking software cross connects in the DACS, de-wiring DSX panels, etc)

- Significant changes to SS7 routing or billing systems.

- All power work and power system preventative maintenance (this includes applying or removing power during growth/de-growth)

- All hardware changes other than sources needed to restore the service affecting concern.

- Any corrective maintenance that can be deferred until the maintenance window.

- Any cable removal/cable mining (where live cables are present in the same trough/path/raceway)

- Acceptance testing of circuits equal to or greater than DS3. (This applies to intrusive test set up. Once the test has been set up, it is ok to let test run for duration needed to prove the circuit).

- Installation of transport interconnects cabling equal to or greater than DS3.

Examples of activities that could occur during normal business hours (outside of the maintenance window) would include the following:

- Facility work - Building new trunk groups and augmenting existing trunk groups, new cell translations (pre-integration).

- Acceptance testing of circuits equal to or less than T1.

- Frame installation - Physical placement of new rack/cabinet/equipment. Note: any power connections or integration of the new equipment is to be scheduled for installation during the maintenance window.

Table 8-1. Maintenance Activity Descriptions:

Maintenance Activity	Description
Disruptive	• Planned network changes will be considered "Disruptive", if they are known to interrupt customer services. This typically involves maintenance and/or upgrades on network "edge" devices ° Disruptive maintenance is defined as work which will affect a customer's connectivity to the network. This generally means that the customer interface will be in a "down" status. Additionally, sustained periods of packet loss are considered to be disruptive
Non-disruptive	• Planned network changes will be considered "Non-disruptive", if they are known to not impact customer services. This typically involves maintenance and/or upgrades on network "core" devices, but may include activity at the network "edge" also. ° Non-disruptive maintenance is defined as work which will <u>not</u> affect a customer's connectivity to the network. This means that the customer interface will still be in an "up" status.
	NOTE: **Latency is considered to be a non-disruptive impact.**
Anytime	• Planned network changes will be performed "Anytime" if any of the following criteria are met: ° A customer has requested a change to configuration supporting their connection and this change would not impact any other customer's traffic or connectivity. ° Network management changes can be executed with little or no risk to customer traffic. ° Peering changes can be coordinated with peers with minor traffic shifts between redundant connections. ° A change will not affect customer traffic, even if executed incorrectly

Maintenance Activity	Description
	° An emergency condition exists and the network change will mitigate (or eliminate) the risk without customer impact (i.e.network element is in imminent danger (i.e. DDOS attacks, natural disasters, hardware defect)

8.3.2. General Work Schedule Guidelines

All maintenance window activities shall be entered in change management as prescribed by Mobility Network Operations Policy **PL-0054 - Change Management**.

All Maintenance/Upgrade activity must be properly scheduled in accordance with the change request process. Unplanned maintenance can be performed without a change management request after receipt of Director/VP level approval.

8.4. Functional Activities Guidelines

- Risk Factors (1-5) - Risk Factors are assigned by SMEs- Risk Factor 5 is the highest risk and 1 is the lowest risk. 5 is the default. 0=none 1=low 2=some 3=average 4=high 5=extreme

- **RED** = Activity includes (RED) steps that require GNO coverage in the complex while the installation work is performed, possibly with no direct oversight. Some RED activities require work tasks by GNO, which are defined in the CHANGE RECORD/SMOP. RED steps require center notification. Scheduling of Red Step activities must be coordinated with the GNO by the supplier.

- **YELLOW** = Activity includes (YELLOW) steps that require the Control Center is notified prior to the start of the step Yellow steps pose a higher risk to the network than Green Steps, and may require direct involvement from the responsible Network Control Center. Direct Control Center involvement must be addressed in the CHANGE RECORD/SMOP. GNO presence is not required in the complex during the execution of Yellow Steps.

- **GREEN** = Requires Control Center awareness while the installation work is performed. GNO presence is not required in the complex during the execution of Green Steps.

Control Center = The responsible network maintenance module

Table 8-2. Mobility Data Operations Maintenance Matrix:

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
Data Applications	Server Maintenances or Growth & Software Upgrades	3 Yellow	Y	12A-6A Su-Th
WAP, Radius, MAG, DSDN, PPG, MIPS, MDM	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
Data Control Operations	Server Maintenances or Growth & Software Upgrades	3 Yellow	Y	12A-6A Su-Th
GGSN, QIP, DHCP, DNS	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
DBA/Netbackup	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
DBA operations, Netbackup	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
Data Core Systems & Storage	Router/Firewall Maintenances/Upgrades	4 Yellow	Y	12A-6A Su-Th
SUN, HP, DMX, SAN, CDL, Infrastructure	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A
* Risk levels with a range indicate some activities may have more complex back out strategies or larger potential customer impacts				

Table 8-3. Mobility Messaging Operations Maintenance Matrix:

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
LDAP Services	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
NDD, Replicas, CPDB, MDS, RDS, Anti-Spam Directory	Major Platform Release Software Upgrades	4 Yellow	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
Messaging Services	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
MMSC, Mobile email, IM, Anti-Spam	Major Platform Release Software Upgrades or Configuration Mods	4 Yellow	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
SMS Services	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
MOSMG, SMSC, OMG, MAR, SMPP, XpressMail	Major Platform Release Software Upgrades or Configuration Mods	4 Yellow	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
ATM / IP Operations	Router/Firewall Maintenances/Upgrades	4-5 Red	Y	12A-6A Su-Th
Router, Firewall, ATM,	Server Maintenances or Growth & Software Upgrades	3 Green = Maint Yellow = Upgrades	Y	12A-6A Su-Th
	Major Platform Release Software Upgrades or Configuration Mods	4 Yellow	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
Security Operations	Router/Firewall Maintenances/Upgrades	4-5 Red	Y	12A-6A Su-Th
	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
* Risk levels with a range indicate some activities may have more complex back out strategies or larger potential customer impacts				

Table 8-4. Mobility Signaling & IP Operations Maintenance Matrix:

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
Signaling Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
SS7, STP, ITP, ELAP, LSMS, ETRAN	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
	Hardware/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	4-5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th
IP Telephony Ops	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
GSX, PSX, SGX, EMS, NFS & RAID	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Hardware/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	4-5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th
NTB/OAM Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
NTB, OAM	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Hardware/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	4-5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th

* Risk levels with a range indicate some activities may have more complex back out strategies or larger potential customer impacts

Table 8-5. Mobility National Voice Services Operations Maintenance Matrix:

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
HLR Operartions	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
HP & Nortel Nodes for GSM & TDMA	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Hardware/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	4-5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th
Provisioning Nodes, MWI Operations (PNMO) & IMS	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
CNOT, Smart Trust, MWI, IMS	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	3-4 Yellow	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
CALEA Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
				Su-Th
Verient, SS8, Lucent, PTT, Nokia, Li-IMS	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
	Interconnection reroutes, maintenance, implementation	3-4 Yellow	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
SCP Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
VVM, Roamware, GMLC, APS, EDA-A, XADS	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation	3-4 Yellow	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
* Risk levels with a range indicate some activities may have more complex back out strategies or larger potential customer impacts				

Table 8-6. Mobility Regional Services Operations Maintenance Matrix:

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
BSS/UTRAN Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
BTS, Node-B, BSC, RNC	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
	Telco/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Hardware implementation, configuration and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation or intrusive testing	4-5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4-5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th
RDC/Switching Core Operations	Server Maintenances or Growth & Software Upgrades	3 Green	Y	12A-6A Su-Th
MSC, SGSN, Regional Data Center	Major Platform Release Software Upgrades or Configuration Mods	4-5 Red	Y	12A-6A Su-Th
	Telco/Circuit implementation and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Hardware implementation, configuration and/or provisioning	3-4 Yellow	Y	12A-6A Su-Th
	Interconnection reroutes, maintenance, implementation or intrusive testing	4–5 Red	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4–5 Red	Y	12A-6A Su-Th
	Database Servers Maintenance/Software Upgrades	4 Yellow	Y	12A-6A Su-Th
	Translations augments & traffic optimization/migration	4 Yellow	Y	12A-6A Su-Th
	Facility maintenance & configuration modifications	2-3 Green	Y	12A-6A Su-Th

Service/Team/Element	Element/Activity	Risk Level (1-5, 5=highest)	NCR Required	Maintenance Window
* Risk levels with a range indicate some activities may have more complex back out strategies or larger potential customer impacts				

8.5. Network Services Process

Providing our customers with reliable, uninterrupted service requires that we make network reliability our number one priority. Everyone involved in supporting and maintaining the AT&T Network needs to be fully informed about work performed on the Network.

Personnel can gain access to the change management tool for logging/report generation of planned network modifications by accessing the following website: http://nisportal.wnsnet.attws.com/Apps/CCM/Login.aspx

8.6. Incident Management Process

AT&T Global Network Operations uses the 3CP (Command, Control, Communications) Process to manage incidents as they occur in the network. When an anomaly occurs that threatens or actually impacts the performance of the network, the response is managed by the GNOC staff through a practiced and proven incident management command process called 3CP. Network anomalies are defined by customer impacting thresholds determined by each of the network technologies. 3CP can be reviewed at the GNOC web site: http://gnoc.web.att.com/gnoc_im.html

During a network incident, there are tiers that allow for the flow of communication within the operations groups and between other AT&T units, local, regional, and corporate organizations. It is critical that clear and accurate information concerning the network incident be communicated to all teams involved.

8.7. Method of Procedure (MOP) / Change Record

A Method of Procedure (MOP) or Change Record is a detailed document which describes a work methodology to line personnel who perform potential service affecting activity in GNO controlled locations. Chapter 2 of **Ask Yourself** provides details on MOPs.

8.8. Method of Procedure (MOP)/Change Record System for Vendor Engagement

The change record system provides an automated method for AT&T personnel and the Vendor/Supplier to create, submit for approval, retrieve, print, and store the MOP forms

A Network Event is defined as any planned work that has the potential to interrupt or degrade AT&T Customer service.

8.8.1. Obtain Data Network Services Network Event Number

Network Event numbers are used for documenting work that is to be performed. In some cases development groups who are requesting the work fill out the form; in other cases the form is filled out by an operations staff member.

8.8.2. Waivers to Data Network Services Approval Guidelines

The Network Events Process is designed to provide oversight of network activity with the goal of minimizing risk to AT&T customer service. If an exception is required for planned maintenance work during a restricted period please complete the form at <u>AT&T Global Network Operations Center</u> .

8.9. National Mobility Network Change Request (NCR) Guidelines

8.9.1. All planned maintenance activity will be submitted via CCM (creating an NCR)

8.9.1.1. Network Change Management

Network change management is the method for requesting, coordinating and approving work to be performed on any national and/or regional network element that is connected to the Mobility Network Operations production environment. The purpose of this policy is to communicate the expected process that should be followed for requesting such changes. Submitting a Network Change Request (NCR) will ensure:

- Planned work is procedurally correct and will be safely performed

- Schedules network element activities to minimize conflicts between multiple work groups

- Works towards eliminating network outages caused by potentially service affecting work being performed at inappropriate dates and times

- Notifies internal customers of scheduled service and non-service affecting activities

- Alerts the appropriate teams of scheduled network activities in order to reduce alarm triage and to minimize unnecessary dispatching of trouble tickets

- Provides an accurate account and contact of the event which can be utilized during any possible troubleshooting activities

• Provides a record of all network activity that has been performed

8.9.1.2. Network Change Request (NCR)

Network Change Request (NCR) is an online request form, designed to present a scope of work for a planned activity on an active, mission-critical part of the Wireless Network. An NCR is necessary for planned activities meeting at least one of the following criteria:

• The proposed planned activity impacts a core network element in the production environment that is carrying live traffic which supports voice, data or signaling services. These elements should be flagged accordingly within the AT&T Mobility Ticketing System (CTS).

• Is service affecting or has a potential to be service affecting

• Results in service degradation for three or more cell sites for one or more different technologies (i.e. GSM, UMTS)

• Work that will impact equipment providing AC or DC power to any item that meets the previously listed criteria.

8.9.1.3. Planned Activity

Planned Activity is a change request that has gone through the implementation process to build, upgrade or enhance any part of the network. It may also be an intentional cessation of network functionality (i.e. database freezes, etc.) for maintenance purposes, which may be identified via a network element audit or a network element vendor.

8.9.2. General Information

All planned maintenance activity must be input into the CCM tool following PL0054 (Mobility Change Management Policy Letter). All activity must be submitted 48 hours prior to the planned activity start time. The NCR must be updated/finalized before 09:45AM PST of upcoming maintenance window (MW)

8.9.2.1. The National Services Operations

The National Services Operations (NSO) change management team will receive an automated report of all upcoming MW NCR's at 10:00AM PST

8.9.2.1.1. NSO CM Team

NSO CM team will review report for correctness

8.9.2.1.2. Report

Distribute report to participant list for the 11:00AM PST NCR approval call. Participants of the 11:00AM PST NCR approval meeting will review the report prior to the meeting and follow up with their teams of scheduled NCR's if needed.

8.9.3. NCR Peer Review/Approval Meeting held daily at 11:00AM PST

8.9.3.1. General Information

Each supervising manager, or delegate, must attend and be able to discuss each planned activity within their responsibility for the upcoming MW.

8.9.3.2. General Information

Each NCR planned activity will be reviewed during this meeting with participants. This team will have the authority to approve Non-Emergency, Non-Exception, and Non-High Risk activity.

8.9.3.3. General Information

Last minute inclusions that weren't input into CCM prior to the deadline (09:45 PST) must be announced by the supervising manager and discussed during the NCR approval meeting. These late additions must be input/updated in CCM before 13:00 PST.

8.9.3.4. General Information

NO planned activity submitted after the NCR approval meeting will be approved if not discussed during the NCR approval meeting.

8.9.3.5. Break/Fix Activity

Break/Fix activity will remain unchanged and is not planned activity.

8.9.3.5.1. Unplanned Activity

Any activity identified to restore network functionality that has not been anticipated by technicians and is usually caused by factors such as weather conditions, human error, system bugs or work that has fallen outside of the established maintenance window.

8.9.4. NCR Executive Leadership Approval/Review Meeting held daily at 13:30 PST

8.9.4.1. General Information

Each supervising manager, or delegate, that has an Emergency NCR, Exception NCR, and/or a High Risk NCR must attend and be able to discuss each planned activity within their responsibility.

8.9.4.2. General Information

Each Emergency, Exception and/or High Risk NCR planned activity will be approved or denied during the approval meeting.

8.9.4.3. General Information

NO last minute inclusions can be brought up during this meeting if not discussed during the Daily Peer review approval/ review meeting

8.9.4.4. General Information

NO planned activity submitted after the NCR Executive leadership approval meeting will be approved

8.9.4.5. Break/Fix Activity

Break/Fix activity will remain unchanged and is not planned activity.

8.9.4.5.1. Unplanned Activity

Unplanned activity: Any activity identified to restore network functionality that has not been anticipated by technicians and is usually caused by factors such as weather conditions, human error, system bugs or work that has fallen outside of the established maintenance window.

8.9.5. Approved Upcoming MW Activity Communication/Report

National Services Operations (NSO) Change Management (CM) team will distribute the NCR work approved to proceed report NLT 14:30 PST.

8.9.6. Perform Approved Work at Approved Time

Workgroup performs approved NCR work during the designated times documented on the request.

8.9.6.1. General Information

Upon completion person performing MW activity updates MOP Master with the result of the activity. Work activity is not complete until the status of the activity is updated.

8.9.6.2. General Information

Workgroup will receive an e-mail to update MOP Master if the status has not been updated by 07:30AM PST.

8.9.7. Daily Leadership Status Report

NSO CM team receives automated status report of previous maintenance window activity at 08:00AM PST.

8.9.7.1. General Information

Performs validation and distributes to leadership

8.9.8. Times for reports and meetings

8.9.8.1. Reports

8.9.8.1.1. 07:30 PST

No Status Reported. Report generated and sent to manager of technician listed as technician performing work advising them to complete the activity by providing a status in MOP Master.

8.9.8.1.2. 08:00 PST

Leadership Status Report of previous MW activity. Report generated and sent to leadership within the organization reporting the status of the previous MW.

8.9.8.1.3. 10:00 PST

Approval Meetings Agenda report. Report sent to all participants of the 11:00 PST Daily NCR approval meeting.

8.9.8.1.4. 13:00 PST

MOP Master Sync Up with CCM for additions. MOP Master gets most up to date sync from CCM with all adjustments resulting from Daily NCR approval meeting.

8.9.8.1.5. 14:30 PST

Approved Activity Report for upcoming MW. Sent to entire organization of all work approved to proceed resulting from the Daily NCR approval meeting.

8.9.8.2. Meetings

Two meetings are held daily to discuss upcoming maintenance activity to get proper level of authority to proceed with planned activity.

8.9.9. NCR Status Update must be completed after activity and prior to 07:30AM PST

8.9.9.1. General Information

A change activity is not complete until the activity status is updated in MOP Master with a Closure Code (any activity lasting longer than the scheduled approved time must be documented in MOP Master notes section).

8.9.9.1.1. Backed Out

Change activity was not executing as expected. Back out plan from change initiated and executed successfully.

8.9.9.1.2. Backed Out Unsuccessfully

Change activity was not executing as expected. Back out attempted unsuccessfully

8.9.9.1.3. Cancelled

Activity was not performed during the assigned MW.

8.9.9.1.4. Re-Scheduled

Activity was not attempted and will be re-scheduled.

8.9.9.1.5. Successful as Scheduled

Change activity completed with no unexpected issues.

8.9.9.1.6. Successful with Problems

Change activity was completed successfully but the change deviated from the plan. During the activity something not documented occurred: examples "maintenance lasted 15 minutes longer than scheduled time" or "activity resulted in customer impact lasting 2 hours instead of 30 minutes as stated in the MOP"

8.9.9.1.7. Unsuccessful

Change activity did not complete as planned.

8.9.9.2. Notes/Comments in MOP Master

Notes must be updated when the following occurs during an NCR event Code (any activity lasting longer than the scheduled approved time must be documented in MOP Master notes section):

8.9.9.2.1. Backed Out Unsuccessfully is Closure Status

Notes/Comments section must be updated with the problem that incurred, including the outage/trouble ticket number (if applicable) for cross reference. These notes must include a summary of customer impact and resolution.

8.9.9.2.2. Successful with Problems is Closure Status

Notes/Comments section must be updated with the problem that incurred, including the outage/trouble ticket number (if applicable) for cross reference. These notes must include a summary of customer impact and resolution.

8.9.9.2.3. Unsuccessful is Closure Status

Notes/Comments section must be updated with the problem that incurred, including the outage/trouble ticket number (if applicable) for cross reference. These notes must include a summary of customer impact and resolution.

8.9.10. Freeze Exception Process

This section describes how to acquire approval and pre-approval to conduct NCR activity during a MW freeze.

8.9.10.1. What is an exception?

8.9.10.1.1. General Information

An exception is an NCR request for activity:

• Outside Normal MW time period (12:00am - 3:00am PT)

• Friday and Saturday Requests (Emergency's are not included)

• During freeze periods

8.9.10.1.2. General Information

An exception is not a Normal NCR submitted with less than 48 hours notice.

8.9.10.2. General Information

Exception requests for work planned outside of normal MW time periods (including Friday and Saturday)

8.9.10.2.1. General Information

Exception NCR must be submitted 48 hours prior to activity start time.

8.9.10.2.2. General Information

All Exception NCR's will be reviewed by operations peer review team and engineering teams prior to being submitted to the Executive leadership team for approval. The NCR Exception request will be reviewed during the first peer review meeting after the request has been submitted. If no conflicts exist and both Operations team and engineering teams approve of the work it will be escalated to Executive Director/leadership for final approval. All exception NCR requests are required to obtain Executive Director approval via the Executive leadership approval meeting.

8.9.10.3. General Information

Exception requests for work to be conducted during a network freeze period, work that cannot be deferred until after the freeze. These requests must go through the following process to obtain approval.

> **NOTE:**
> **Freeze exceptions are not intended to perform work due to a lack of planning!**

8.9.10.3.1. General Information

All exception requests for work during a network freeze period must be submitted via the GNOC webpage http://gnoc.web.att.com/gnoc_gcm.html (Under *"Global Change Management Processes"* section select the *"Restricted Day Exception Request Form"*) as soon as it has been identified that this activity must be performed and cannot be deferred until after the freeze period.

8.9.10.3.2. General Information

Exception requests must be submitted 3 business days prior to the start of the network freeze period (not 3 business days prior to work activity date). This time period is required to validate business need, de-conflict exception requests, obtain approval and to plan resources.

8.9.10.3.2.1. General Information

Request will be reviewed and approved/denied within 3 business days

8.9.10.3.2.2. General Information

Requests must be complete stating the 5W's (who, what, when, where, and why) in the appropriate fields on the form. The business reason for work to proceed during a freeze must be accurate and explain why the work cannot be deferred until after the freeze. Incomplete forms will be rejected. (Note: Multiple requests can be submitted on one form IF the business reason and the scope of work are the same)

8.9.10.3.2.3. General Information

National Services Operations (NSO) Change Management team will validate the form for completeness. Validate business reason to proceed during a freeze period, and obtain Operations support.

•   If both Business reason is valid AND Operations/Engineering teams support the activity the NSO CM team will bring the request to the executive leadership approval meeting

•   If either the business reason is not valid OR Operations/Engineering team does not support the activity during a freeze period the NSO CM team will reject the request. The change activity may be performed after the freeze period.

8.9.10.3.2.4. General Information

An e-mail reply (Approved or Denied) to the Freeze Exception requestor will be communicated within 3 Business Days of the request.

8.9.11. Normal NCR Process Flow

```
                    ( Process starts )
                           │
                           ▼
                 ┌─────────────────────┐
                 │ Receive trigger to  │
                 │ perform necessary   │
                 │        work         │
                 └─────────────────────┘
                           │
                           ▼
                 ┌─────────────────────┐
                 │ Review trigger for  │
                 │      content        │
                 └─────────────────────┘
                           │
                           ▼
                 ┌─────────────────────┐        • Is testing required
                 │      Perform        │        • Do we have a valid test plan
                 │  validation steps   │────    • Ability to test after change
                 │    on trigger       │        • Roll back plan
                 └─────────────────────┘        • Engineering been consulted
                           │                    • "Ask Yourself", can you answer "Yes" to all?
                           ▼
                      ◇ Are all previous
                        activities valid to        No      ┌──────────────────┐       ( Process is
                           proceed? ◇ ─────────────────────│ Send trigger back│──────   complete )
                           │                               │ to originator/   │
                           │ Yes                           │   requestor      │
                           ▼                               └──────────────────┘
                 ┌─────────────────────┐        Submitting an NCR must be done using the
                 │  File the NCR,      │        guidelines stated in PL0054 (Mobility Change
                 │  selecting all      │────    Management Policy Letter).
                 │  affected Network   │        Must be submitted 48 hours in advance from
                 │  Elements and date  │        desired work activity start time.
                 │  and time the       │
                 │  activity is to     │
                 │  take place.        │
                 └─────────────────────┘
                           │
                           ▼
                 ┌─────────────────────┐
                 │  Daily 09:45 AM     │
                 │  PST: Mop Master    │
                 │  refreshes data     │
                 │  with CCM           │
                 └─────────────────────┘
                           │
                           ▼
                 ┌─────────────────────┐        Cutoff for all NCR updates.
                 │  Daily 10:00 AM     │────
                 │  PST: Mop Master    │
                 │  creates report for │
                 │  Daily Peer Review  │
                 │  Approval meeting   │
                 └─────────────────────┘
                           │
                           ▼
                 ╱─────────────────────╲       NMO CM team validates report and
                 │ NMO CM team reviews  │       "bucketizes" the NCR's for the upcoming
                 │  the report and      │────   MW. Follows up on any potential conflicts
                 │  distributes to the  │       Buckets are:
                 │  participants of the │       1. Exceptions
                 │  Daily Peer Review   │       2. Emergencies
                 │  Approval Meeting    │       3. High Risk Activities
                 ╲─────────────────────╱       4. Remaining scheduled activities
                           │
                           ▼
                 ╱─────────────────────╲
                 │ NMO Leadership/      │
                 │ Engineering review   │
                 │ the Daily Peer       │
                 │ Review Approval      │
                 │ Meeting report.      │
                 ╲─────────────────────╱
                           │
                           ▼
                        ┌──────┐
                        │  A   │
                        └──────┘
```

A

11:00 AM PST: Daily Peer Review Approval Meeting for upcoming maintenance window (MW)

- Leadership/Engineering must be prepared to discuss each planned activity within their responsibility. Agenda: Announcements (Upcoming freezes, etc), Discuss Exceptions, Emergencies, High Risk Activities that will be escalated to leadership for approval, Remaining scheduled activities for peer review approval, and high risk activities scheduled during the next MW.
- Late schedule changes must be brought up during this meeting to receive approval to proceed during upcoming MW
- NO planned maintenance will be approved if not discussed with leadership/engineering during this meeting.

If needed workgroups update CCM as a result of Daily Peer Review Approval Meeting

NMO CM team updates reports and distributes to the participants of the Daily Executive Leadership Approval Meeting

NMO CM team validates report and "bucketizes" the NCR's for the upcoming MW. Follows up on any potential conflicts.
Buckets are:
1. Exceptions
2. Emergencies
3. High Risk Activities
4. Remaining scheduled activities

13:30 PST: Mop Master refreshes data with CCM to include late additions discussed during Daily Peer Review Approval Meeting

13:30 PST: Daily Executive Leadership Approval Meeting for upcoming maintenance window (MW)

- Leadership/Engineering must be prepared to discuss each planned activity within their responsibility. Agenda: Announcements (Upcoming freezes, etc), Discuss Exceptions, Emergencies, High Risk Activities that will be escalated to leadership for approval, and Remaining scheduled activities for peer review approval
- Late schedule changes must be brought up during this meeting to receive approval to proceed during upcoming MW
- NO planned maintenance will be approved if not discussed with leadership/engineering during this meeting.

14:30 PST: Mop Master creates report for all approved activity for upcoming MW as a result of the Daily Approval Meeting

Workgroup performs pre-activity work steps.

- Call NOC before executing MOP steps
- NCR is approved state?
- Check state of the network, Saving configuration and status
- Check KPI

No

Are all pre-activity steps completed and acceptable to proceed

Yes

B

AT&T Practice   ATT-002-200-715

Issue 1, 04/27/09

B

Did changes go into network as expected? —No→

Yes ↓

Perform test plan ← Perform rollback plan.

↓

Did everything pass test plan as expected? —No→

Yes ↓

Workgroup performs post-activity work steps.
- Perform post check of the network.
- Saving current configuration and status info.
- Call NOC after executing MOP steps

↓

Technician performing work accesses Mop Master and performs updates
- Updates in Mop Master must include:
- Status
- Comments/Notes
- NOC contacts before and after change
- Updates must be completed by 07:30AM PST

↓

07:30 PST: Mop Master creates a report of all NCR's from previous MW that have past the completion time and have not had the status updated. Sends report out to technician assigned to these NCR's.
- Updates in Mop Master must include:
- Status
- Comments/Notes
- NOC contacts before and after change
- Updates must be completed by 07:30AM PST for the technician not receive this e-mail

↓

08:00 PST: Mop Master creates a report of all NCR's from previous MW. Sends to leadership in the NMO organization.

↓

Process is complete

8.9.12. Additional Resources

Fields Required for NCR Data Fill

CCM 2.0 Calendar
http://nisportal.wnsnet.attws.com/APPs/CCM/Activities/ViewAllNCR.aspx?Mode=New

CCM 2.0 submits a NCR: a login/password is require
http://nisportal.wnsnet.attws.com/APPs/CCM/Activities/NewEquipmentBasedNCR.aspx?Mode=New

CCM 2.0 front page view
http://nisportal.wnsnet.attws.com/APPs/CCM/CCMHome.aspx

Centralized_Change_Management_User_Guide.doc
You may download this file from the online version of this document.
Note: You must have the proper application in order to open the file.
Wireless_Network_Operations_Policy_Letter.doc
You may download this file from the online version of this document.
Note: You must have the proper application in order to open the file.

8.9.13. Definitions

Maintenance Window (MW) - All planned system maintenance that may be service affecting (All technologies included) must be performed within a specified window of time. For Mobility Network Operations this maintenance window shall be Monday through Sunday, from 12:00 AM (Midnight) until 6:00 AM local time. Any maintenance window activity performed on a platform that serves areas that span multiple time zones shall not commence until all time zones that could be affected have entered the maintenance window and completed by 06:00 of that time zone.

Regular NCR - Regular NCRs are submitted well in advance of the proposed change to allow for appropriate inspection and resource planning.

Exception NCR - Can only be scheduled for maintenance work:

•   Outside the designated normal maintenance window for the type of work performed

•   Friday or Saturday, except for Emergency NCR's.

•   During maintenance freeze (NCR's that cannot be deferred out until after the conclusion of a freeze).

Emergency NCR - Emergency NCRs (eNCR) are those that are submitted with less than the required timeframe to remedy a network incident that has interrupted normal service and/or threshold levels or is necessary to avoid a potential network event.

NOTE:

Emergency NCRs are intended to correct or prevent critical situations and must not be used to cover poor planning.

Closure Code - This field is a required field and must be chosen by the assignee when the change is completed. Available selections are: Backed Out, Backed Out Unsuccessfully, Cancelled, Successful as Scheduled, Successful with Problems, and Unsuccessful.

Critical NCR's - Critical NCRs must be submitted four (4) business days in advance of the proposed start date/time and have the potential to result in a SIR 1/1E network incident. As an example, the submitter should consider the number of trunks affected, restorability and the potential service impact to determine whether this severity is appropriate.

Major NCR's - Major NCRs must be submitted two (2) business days in advance of the proposed start date/time and have the potential to result in a SIR 2 network incident.

Minor NCR's - Minor NCRs must be submitted two (2) business days in advance of the proposed start date/time and have the potential to result in a SIR 3 network incident.

After-Hours Emergency NCR's - All Emergency NCRs that are received after normal business hours will require special handling. The submitter will be responsible for obtaining all level approvals in advance of NCR submission.

After_Hours_Emergency_NCR.doc
You may download this file from the online version of this document.
Note: You must have the proper application in order to open the file.

8.9.14. Acronyms

	Definition
CCM	**Centralized Change Management**
CM	**Change Management**
CTS	**AT&T Mobility Ticketing System**
CUID	**AT&T Mobility User ID**
eNCR	**Emergency (or Exception) Network Change Request**
FMS	**Fault Management System**
GSM	**Global System for Mobile Communications**
MW	**Maintenance Window**
MNOC	**Mobility Network Operations Center**
MOP	**Method of Procedure**

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NSO	National Services Operations
NCR	Network Change Request
NOC	Network Operations Center
NS	Network Service
PW	Plan Works
SIR	Service Interruption Report
UMTS	Universal Mobile Telecommunications System
WNS	Wireless Network Service

8.10. Regional Mobility Network Change Request (NCR) Guidelines

An NCR is an online request form, designed to present a scope of work for a planned activity on an active, mission-critical part of the Wireless Network.

An NCR is necessary for planned activities meeting at least one of the following criteria:

- The proposed planned activity impacts a core network element in the production environment that is carrying live traffic which supports voice, data or signaling services. These elements should be flagged accordingly within the AT&T Mobility Ticketing System (CTS).

- Is service affecting or has a potential to be service affecting

- Results in service degradation for three or more cell sites for one or more different technologies (i.e. GSM, UMTS)

- Work that will impact equipment providing AC or DC power to any item that meets the previously listed criteria.

8.10.1. Planned Activity

An activity which has gone through the implementation process to build, upgrade or enhance any part of the network. It may also be an intentional cessation of network functionality (i.e. database freezes, etc.) for maintenance purposes, which may be identified via a network element audit or a network element vendor.

Please review the Network Services **PL-0147 Change Freeze Policy (GNO Network Restriction policy)** documentation for details regarding intentional work avoidance criteria. The policy can be found at http://ns.cingular.net/policy_all.aspx .

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8.10.2. High Level Role Description Matrix

Table 8-7. Mobility Change Management Roles and Responsibilities

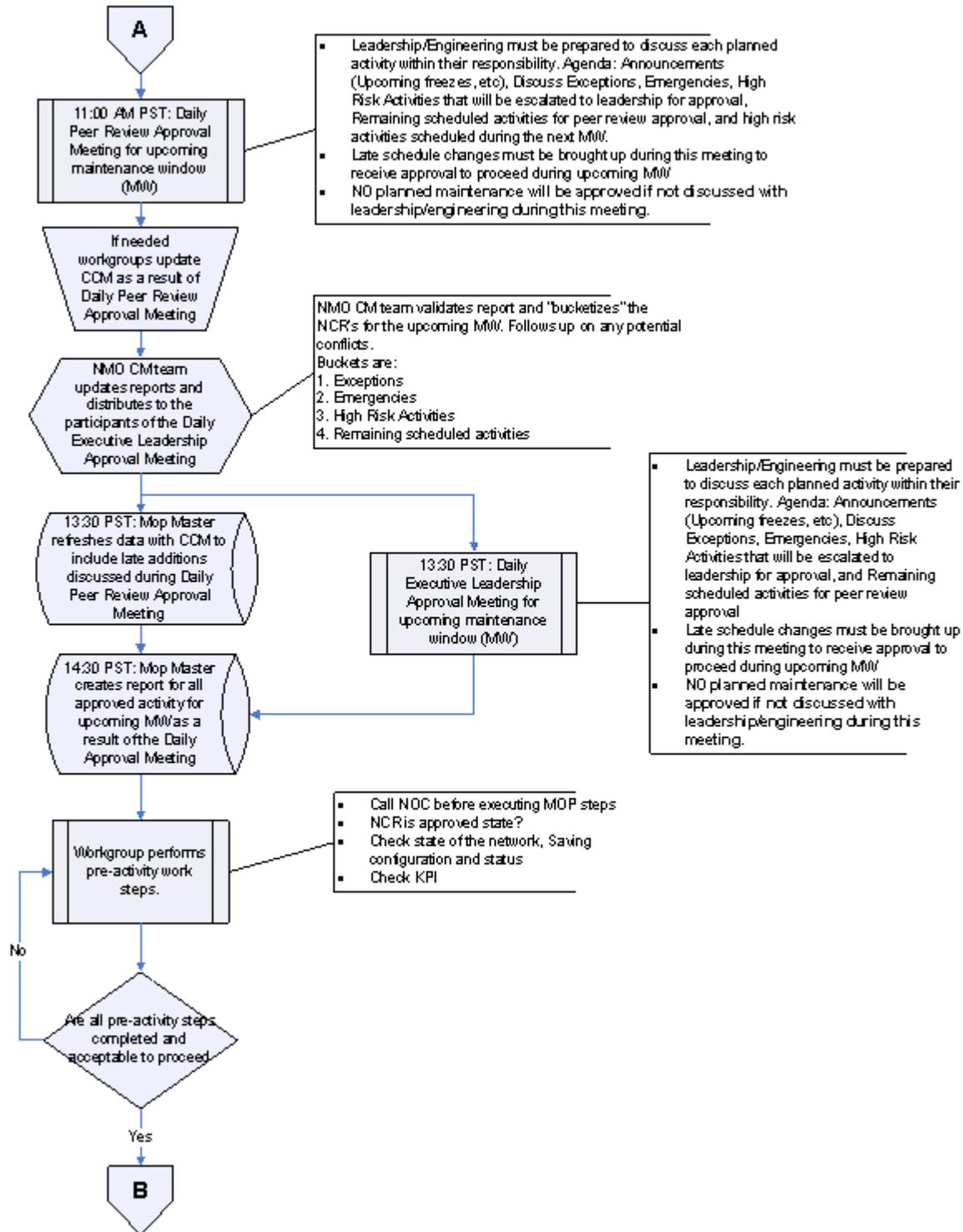| Role	Responsibility
NCR Submitter	• Submits NCR in accordance with requirements outlined in section 5.2 of the Change Management Network Document
NCR Technical Reviewer	• Conducts comprehensive technical review of proposed network changes • Attests to technical accuracy of procedures and documentation contained in the NCR
Operational Approver	• Reviews and provides management approval for pending NCRs while adhering to network freezes • http://ns.cingular.net/Policy%20Letter/PL-0147%20v1.pdf
Planned Works	• Conducts administrative reviews of NCRs to ensure completeness, and to verify compliance with NS Change Management policy • Decline or return incomplete NCRs or NCRs not compliant with NS Change Management policy • Facilitates review of NCR with other planned maintenance activities to ensure no network conflicts • Submits NCR to management for approval • Provides notifications of pending NCRs to potentially impacted regions/markets as necessary
Sponsor	• Provides internal sponsorship for NCRs being submitted on behalf of vendors, LECs or other non-AT&T employees
Work Performer	• Coordinates necessary personnel for support of work being performed • Notifies NS NOC before and after planned work has been completed • Creating Equipment in Maintenance record in accordance with PL-0149 • http://ns.cingular.net/Policy%20Letter/PL-0149.pdf
Network Operations Center	• Provides after-hours support for any issues that may occur as a result of planned maintenance in the network • Appends alarms associated with planned maintenance to appropriate trouble ticket

Role	Responsibility
	• Verify update to CTS before ticket Auto close with planned maintenance upon receiving notification from work performer that maintenance has been completed • Sends SIR notifications for work activity that will knowingly result in a service disruption and/or extends beyond the maintenance window

8.10.2.1. NCR Roles & Responsibilities Defined

NCR Submitter

An NCR submitter can be anyone with an assigned AT&T Mobility User ID (CUID) who is requesting to perform work in the production wireless network with a Centralized Ticketing System (CTS) account. The user must ensure that they meet the requirements for use of the AT&T Mobility Centralized Change Management Tool (CCM)

NCR submitters are responsible for:

• Ensuring that a technical review of pending network changes prior to NCR submission has been conducted by someone other than themselves and identify technical reviewer in the creation of the NCR.

• A technical review of the proposed changes must be conducted before the NCR is submitted for further approval.

> **NOTE:**
> **A technical review of the proposed changes must be conducted before the NCR is submitted for further approval.**

• Creating the online change request (NCR) form

• Completing all required fields with as much detail as possible

• Providing a detailed step-by-step procedure for the work that is to be performed

• Providing a detailed vendor method of procedure (MOP) if applicable

• Verifying that work will not conflict with other scheduled maintenance

• Ensuring that the procedure is tested and approved by HQ if applicable

• Securing necessary resources to complete the proposed work

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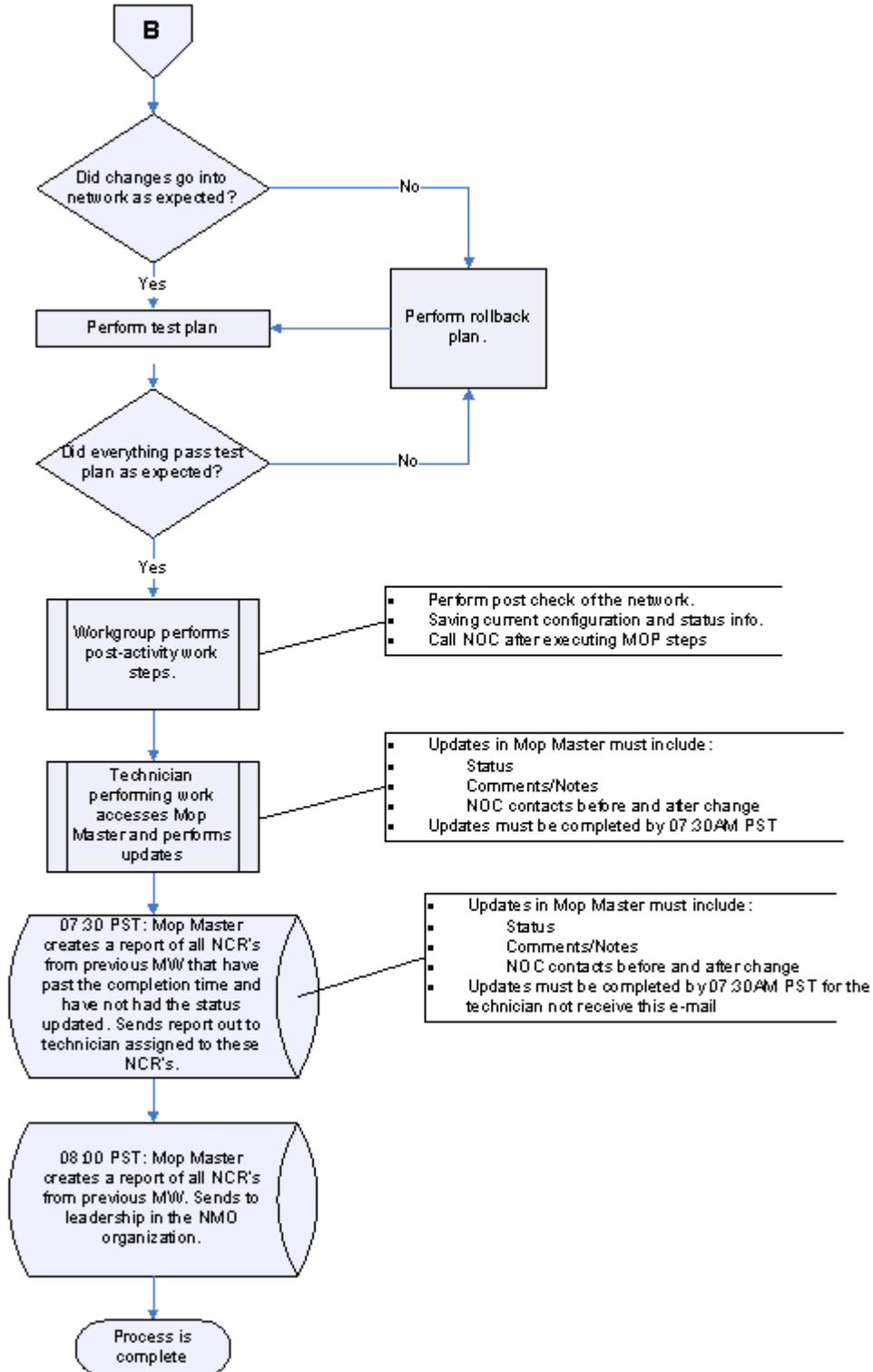Not for use or disclosure outside the AT&T companies, except under written agreement.

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- Submitting NCRs in accordance with the Severity Table 2.1

- Fully understanding the responsibilities of all functional participants and their responsibilities, as well as the network change request processes

> **NOTE:**
> **Submitting an NCR does not automatically ensure that resources are available and scheduled to support the work that is being requested. It is essential that the NCR submitter engage the appropriate work teams to coordinate applicable pre-work and/or post change service validation.**

NCR Technical Reviewer

The NCR Technical Reviewer will assess all critical and major change requests for technical and procedural accuracy.

The NCR Technical Reviewer is responsible for:

- Reviewing proposed network changes and validate that the proposed MOP meets the planned works requirement. The test plan meet the work to be performed in the MOP and that the back out plan would restore service during the maintenance window

- Confirming that change will be conducted on the correct network element

- Minimizing preventable outages to ensure and maintain network reliability

- Providing 'stamp of approval' for internal or vendor supplied change requests

- Attesting to and accepting responsibility for the technical and procedural accuracy of the proposed network change

> **NOTE:**
> **Network changes that require modification to existing database of record data fill (i.e. CSS and/or Granite), will need to be assigned to an individual and reflected within the submitted NCR.**

Mobility Network Operations Center Planned Works

The MNOC Planned Works will review all NCRs to ensure that all required information is provided (i.e. administrative check). Upon acceptance, the NCR is automatically assigned to the appropriate approver for final approval.

The MOBILITY NETWORK OPERATIONS Planned Works Team is responsible for:

- Performing and administrative business check for all submitted NCRs

- Reviewing NCR for obvious potential conflicts

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- Creating and maintaining approval routing configuration

- Overseeing that the NCR process aligns with established policies at all times

- Communicate with up- and down-stream organizations as necessary

AT&T Mobility NCR Sponsor

The AT&T Mobility sponsor must ensure that a vendor supplied Method of Procedure (MOP) covers the scope of work that the vendor will perform.

The AT&T Mobility sponsor is responsible for:

- Serving as the accountable party for any issues that may occur as a result of the vendor planned activity

- Acquiring vendor connectivity and access into network elements where work will be performed

- Reviewing the National Change Calendar to ensure that no conflicts could occur with existing scheduled work

- Ensuring that the NCR contains all requested key field information and includes a documented method of the procedure to be completed.

    In the event of an unplanned customer affecting outage that extends beyond the maintenance window, notifies the NOC so that a SIR notification will be generated and a conference bridge will be set up.

Work Performer

The Work Performer is the person actually performing the approved NCR work (Operational Technician/Engineer, contracted employee, approved Vendor or other MOBILITY NETWORK OPERATIONS employee).

Work performer responsibilities include;

- Walking through the planned work (dry run) to identify possible gaps in the procedure

- Attesting to and accepting responsibility for the technical and procedural accuracy of the proposed network change

- Ensuring that the work area is safe to commence the work and that all safety precautions have been taken

- Creating Equipment in Maintenance record in accordance with PL-0149 http://ns.cingular.net/Policy%20Letter/PL-0149.pdf

- Notifying the MNOC immediately before the work begins

- Notifying the MNOC immediately after the work is completed

- Notifying the MNOC and Operations / Market Manager immediately if the work is not completed or requires activation of a rollback plan, or exceeds the appropriate maintenance window end time

> **NOTE:**
> **MNOC notification is mandatory on all work that is scheduled. There must be no exception to this notification.**

- Performing the work according to the approved procedure

- Removing all debris related to the work from the work area as necessary

> **NOTE:**
> **Any Network activity undertaken without creation and approval of an NCR within the change management tool will be considered as a serious failure to comply with AT&T Mobility Operational Policies and Procedures.**

Mobility Network Operations Center (MNOC)

The MNOC monitors the production wireless network for alarms and problems within the wireless network. The MNOC will correlate any work that may be producing alarms via the FMS tool prior to engaging field or operations personnel.

The MNOC is responsible for:

- Monitoring the network for alarms via the Fault Management System (FMS) tool and/or network element

- Verify EIM status in CTS

- Understanding and performing specific action items included in the NCR pertaining to FMS

- In the event that an unplanned outage occurs and extends beyond the maintenance window or planned outage time, the MNOC must be notified immediately by the work performer

> **NOTE:**
> **The MNOC will send any applicable notifications via the established SIR process description, in coordination with the Lead Engineer indicated in the NCR. The Mobility Network Operations Center may be reached at: 1-800-638-2822**

8.10.3. NCR Types

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A NCR serves two purposes:

1. It is used to analyze and approve the proposed activity based on the scope of work.

2. It is used to prevent work scheduling conflicts.

This is accomplished by channeling all network changes from a BSC level and above to be approved by your local Region NOC (i.e. BSC, MSC, SGSN, ATM, VM, E-911 eqm. etc.) or NSD NOC (HLR, STP/SCP, GGSN, SMS, DNS Server, etc.) CM/ PW group respectively for all severity levels.

Any network changes at BTS (radio) level or Site Maintenance (i.e. Building and grounds maintenance, Tower work, etc in addition SIR1 or above level service impact, which equates to 15 sites or more requires the following rules to be adhered to:

• All planned works require a NCR to be submitted with MOPs included

• All MOPs must specify post-work service verification (normally call testing).

• All MOPs must be executed as specified

• The NOC must be notified before the start of any planned work, and at the completion.

• Any alarms from the planned work need to be cleared prior to completion of the planned work.

Any violation of these five rules, resulting in a SIR 1 or above level service impact, will result in the following disciplinary actions:

• Final written notice for the violation of the rule

• Minimum of 3 day non-paid suspension

• Inclusion of the violation in the employees annual performance review

If this severity level is determined to be necessary, and will result in a SIR 1E (FCC Reportable), Regional VP and Executive Director HQ Operations approval will be required. Network Change Requests are divided into two distinct types, regular and emergency.

8.10.3.1. Regular NCR

Regular NCRs (MOP) are submitted well in advance of the proposed change to allow for appropriate inspection and resource planning.

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8.10.3.2. Emergency NCR

Emergency NCRs (eNCR/eMOP) are those that are submitted with less than the required timeframe to remedy a network incident that has interrupted normal service and/or threshold levels or is necessary to avoid a potential network event.

> **NOTE:**
> **Emergency NCRs are intended to correct or prevent critical situations and must not be used to cover poor planning.**

8.10.4. Guideline for NCR Severity Levels

The determination of service interruption is vital during the planning phase of the work to be performed. Any planned activity within the MOBILITY NETWORK OPERATIONS production environment that will interrupt services, or possess the potential to interrupt service, must be scheduled during the maintenance window.

- Must be categorized as critical or major and have the potential to result in a SIR 1/1E or 2, respectively

- Requires Director and possibly Executive Director level approval as well as switch and / or platform manager approval depending upon the known service impact

- Requires special handling if submitted after the established daily cut-off period

Changes are categorized in four different severity levels, critical, major and minor. Successful post-change service validation coordination will be dependant on sufficient timing and planning. Table 2.1 below provides a high level description of the type of work that must be categorized by severity level and the expected lead time necessary for regional and/ or national approval.

Submitters must determine the severity level of a network change based on the following guidelines

Critical NCR's

Critical NCRs must be submitted four (4) business days in advance of the proposed start date/time and have the potential to result in a SIR 1/1E network incident. As an example, the submitter should consider the number of trunks affected, restorability and the potential service impact to determine whether this severity is appropriate

- If this severity level is determined to be necessary, and will result in a SIR 1E (FCC Reportable), Regional VP and Executive Director HQ Operations approval will be required.

> **NOTE:**

> FCC reporting guidelines define all SIR 1E planned outages that exceed 30 minutes as an "FCC Reportable" event.

Major NCR's

Major NCRs must be submitted two (2) business days in advance of the proposed start date/time and have the potential to result in a SIR 2 network incident.

Minor NCR's

Minor NCRs must be submitted two (2) business days in advance of the proposed start date/time and have the potential to result in a SIR 3 network incident.

> **NOTE:**
> **Severity must not be determined by the scope of work or project but rather by potential or actual customer impact.**

Table 8-8. NCR Severity Levels

Severity Level	Description	Days
Critical Potentially causing a SIR 1E or SIR 1 Network Outage	Traffic-affecting work of any kind, work preventing observation of the Network by OSS (FMS) or any planned work which potentially can result in a SIR 1E or SIR 1 network outage. Examples include non-fault related restarts of network elements, reconfiguration of traffic carrying circuits, or isolation of any element during work on the Voice/Data Network. This also applies to planned activities that are necessary to mitigate a potentially service affecting condition within the network. This work must be performed in the maintenance window.	Four (4) or more business days in advance of proposed start time
Major Potentially causing a SIR 2 Network Outage	Work that may involve a risk of service disruption, which temporarily removes traffic protection from some part of the Network or any planned work which potentially can result in a SIR 2 network outage. Examples include battery discharge tests, installation of new software builds, equipment installations involving cabling on site and non-fault related change over "hitless" protection systems. This work must be performed in the maintenance window.	Two (2) or more business days in advance of the proposed start time
Minor Potentially causing a SIR 3 Network Outage	Any configuration changes that will have a minimal customer service interruption (i.e. activity that requires a brief interruption to call processing). For example, lifelines,	Two (2) or more business days in advance of the proposed start time

Severity Level	Description	Days
	backups, facility and environmental work. This work must be performed in the maintenance window.	
Emergency	A unique category to enable work to be scheduled under extreme conditions (i.e. outage restoration) or when an emergency action must be performed to restore or prevent any network quality degradation from occurring. Emergency MOPs can only be requested based on Critical and Major severity levels.	Less than 48 hours or less than time to meet 96 or 48 hour rule.

> **NOTE:**
> **All NCRs must be in 'approved' status prior to performing any changes on the network. Emergency NCRs are intended to correct or prevent critical situations and must not be used to cover poor planning.**

8.10.5. After-Hours Emergency NCR's

All Emergency NCRs that are received after normal business hours will require special handling. The submitter will be responsible for obtaining all level approvals in advance of NCR submission. See Policy letter roles and responsibility.

- Need to inform Mobility Network Operating Center of event by phone call, where necessary coordinate the Conference Bridge and Notify ATS of network status

- Create CTS ticket, send all notification pertaining to network status update

- Refer to workflow diagram

> **NOTE:**
> **The person producing the NCR is responsible for understanding the service affecting impact or the potential service-affecting impact of the scheduled activity.**

8.10.6. Exceptions to NCR Approval Guidelines

The change request process is designed to provide approval of network activity with the goal of minimizing risk to any customer service. If an exception is required for planned maintenance work during a restricted period all users need to be aware that the work will require additional approval by upper management, up to the VP level. The work may be cancelled, rescheduled, or processed depending on the nature of the work and the criticalness of the work. Upon submis-

sion of a change request in Remedy, users will be prompted with warnings identifying all restricted areas. Users have the ability to continue with the request or alter the information to perform the work outside of the restricted parameters.

8.10.7. Immediate Maintenance Emergencies

- **Planned Maintenance** - consists of Hardware and software activities or other maintenance work that is known and planned in advance. These require the work to be submitted 18 days in advance. Consisting of the required 14 day notification requirement to all customers and allowing an additional 4 days for questions, approvals, or resubmissions.

- **Emergency Maintenance** - Service is disrupted or in imminent danger of disruption and can not be scheduled out more than 14 days, but can be scheduled to be worked during a maintenance window. Customers are affected. Approval for emergency work may be provided by DSNOC Manager on duty or Technical Director for the DSNOC if after hours.

- **Unplanned Maintenance** - Service is disrupted or in imminent danger of disruption and can not wait until the next maintenance window. Customers are affected. DSNOC follows the PANIC process (see section 11.7).

  Where service has been disrupted or disruption is imminent and customers are impacted, repair/restoration procedures may proceed without adherence to the formal Change Management Process, as directed by the MNRC Manager On Duty. However, the parties involved with the unplanned work should have a plan that incorporates the considerations addressed in all situations.

  When service has been degraded and there is no customer impact then the work should be completed in the next appropriate maintenance window using a non-disruptive request and coordinated through the center. This work would fall into the category of Planned Maintenance.

Table 8-9. Unplanned vs. Planned Maintenance Guidelines

MOP and SMOP Guidelines				
Type	**Classification**	**MOP Requirement**	**Requires NCR**	**Examples**
Fault Management	Unplanned - Emergency Maintenance (any network condition which is currently negatively impacting customer availability or performance)	Tier 2 - technically accurate written work instructions	N	Any condition in which customers are out of service or are experiencing performance issues such as excessive latency or packet loss.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) Low or Medium Risk/Impact	Tier 2 - technically accurate written work instructions	N	Correcting simplex conditions (redundant processor cards, power supplies), chronic network compo-

MOP and SMOP Guidelines				
Type	Classification	MOP Requirement	Requires NCR	Examples
				nents, and normalizing workarounds.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) - High Risk & High Impact	ATS approved formal MOP with Risk Assessment.	Y	Correcting major network anomalies (i.e. chassis swaps, software upgrades to resolve critical bugs/vulnerabilities, and network architecture changes)
Change Management	Planned- Expedited Software/Hardware Upgrades	ATS approved formal MOP with Risk Assessment	Y	Critical capacity augments to resolve projected performance issues and/or enable customer revenue streams.
	Planned- BAU Software/Hardware Upgrades	ATS approved formal MOP with Risk Assessment	Y	All other planned changes.
* Next available window means the first window in which the right procedure, parts, and people are available to correct the condition.				

* Next available window means the first window in which the right procedure, parts, and people are available to correct the condition.

8.11. Safety and Environment

See **Ask Yourself** Chapter 5 for information regarding Safety and Environment.

8.12. Security

See **Ask Yourself** Chapter 6 for information regarding Security

8.13. Disaster Recovery

A disaster declaration occurs when the structure and/or all/most of the equipment which is deemed mission critical to an operation, becomes unusable. Business Continuity and Network Disaster Recovery planning includes the following components: {listing}

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Disaster Recovery support team, processes and documents outlining details of the overall DR plan can be located http://ndr.web.att.com/division/index.html .

9. International

9.1. Service Protection

9.1.1. Introduction

This section has been incorporated to support the successful implementation of Ask Yourself and Network Events Process within the International Undersea Cable & Cable Station environment. The information supplied herein is intended to address work items specific to the International Undersea Cable & Cable Station Network. For general information and maps of these systems please access the Undersea Cable Operations and Maintenance web site.

9.1.1.1. International Cable Stations and Associated CLLI Codes

Table 9-1 International Cable Stations

Name	**CLLI**	**Site Contact #**	**Site Supervisor**	**Email Address**
Green Hill, RI	GNHLRI01	609-296-2221	Stephen O'Mara	somara@att.com
Shirley, NY	SHLYNYAE	631-281-6003	Stephen O'Mara	somara@att.com
Tuckteron, NJ	TKTNNJTH	401-789-9785	Stephen O'Mara	somara@att.com
Vero Beach, FL	VRBHFLOS	772-770-1630	Stephen O'Mara	somara@att.com
Hollywood, FL	MIAPFLJCA02	305-654-4227	Stephen O'Mara	somara@att.com
West Palm Beach, FL	WPBHFLOS	954-294-8407	Stephen O'Mara	somara@att.com
San Juan, PR	SNJNPRZA	787-729-3737	David Marquez	dmarquez@americas.att.com
Magens, Bay St. Thomas, USVI	MGBAVIZA	340-775-2075	Dexter Freeman	ddfreeman@att.com
Butler Bay, St. Croix, USVI	STCRVIAD	340-772-3508	Phil Shuman	pshuman@att.com

Name	CLLI	Site Contact #	Site Supervisor	Email Address
Kingston, Jamaica	KGTNJMZAW01	876-938-8508	Winston Clayton	wclay@cwjamaica.com
Bandon, OR	BNDNORAA	541-347-5201	Ken Byrne	kcbyrne@att.com
Manchester, CA	MNCHCA01	707-882-2108	Ken Byrne	kcbyrne@att.com
San Luis Obispo, CA	SNLOCA03	805-546-2222	Ken Byrne	kcbyrne@att.com
Makaha, HI	MKHAHICTWCR	808-696-4224	Wayne Yamamoto	wyamamoto@att.com
Keawaula, HI	KEWLHIZA	808-696-2455	Wayne Yamamoto	wyamamoto@att.com
Tanguisson, Guam	GMISGUZA	671-646-8477	Tom Bernardo	ttbernardo@att.com
Tumon Bay, Guam	TMBYGUZA	671-649-8946	Tom Bernardo	ttbernardo@att.com

9.1.2. Service Protection

Our goal of providing our customers with world class service through valued, empowered and supported employees can only be reached if each employee takes personal responsibility for his or her job and works to resolve uncertainties or problems.

9.1.2.1. 'Ask Yourself' Questions and Methodology

Listed below are ten questions that you should be able to answer "**YES**" before you undertake any task.

THE TEN 'ASK YOURSELF' QUESTIONS:

1.   Do I have the proper ID and appropriate building access permissions for the environment I am about to enter?

2.   Do I know why I am doing this work?

3.   Have I identified and notified everybody - customers, and internal groups - who will be directly affected by this work?

4.   Can I prevent or control service interruptions?

5.   Is this the right time to do this work?

6.   Am I trained and qualified to do this work?

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7.   Are the work orders, MOPs, and supporting documentation current and error free?
8.   Do I have everything I need to quickly and safely restore service if something goes wrong?
9.   Have I walked through the procedure?
10.   Have I made sure the procedure includes proper closure including obtaining clearance and release for the appropriate work center?

If you answer 'NO' to any of these ten questions, please STOP and RESOLVE the question before RESUMING your work.

For any questions that you cannot answer, you should first contact a peer or your immediate supervisor. If he or she is unavailable or does not know the answer, your next step should be to identify the appropriate technology center (see Chapter 1 of Ask Yourself for Work Center contacts) , and then to call for assistance.

9.1.2.2. Index of Technologies and Technology Centers

Please see Chapter 1 of Ask Yourself, for a complete list of technologies and phone numbers. http://www.qms.att.com/odms/NM/NPQ/GENERAL-METHODS/NCS/148/010-515-170c01.pdf

9.1.2.3. International Undersea Cable & Cable Station SMEs

The SME list is maintained at the GNOC Global Change Management Home page . Please select the tab for 'Undersea Cable & Earth Stations' to view a listing of the SMEs.

9.1.2.4. International Systems Maintenance (ISM) - Undersea Cable-Failure Reporting Notification Procedure

In the event of an Undersea Cable System Failure, follow this notification flow:

•   Contact the Duty Mgr (pager shown below)

•   If no response from Duty Mgr, contact Tech Support Mgr

•   If no response from Tech Support Mgr., Contact Director

•   If no response from the Director, Contact the Network AVP

• If no contact can be made, notify the first available person listed below. This procedure supplements any local practices now in use.

Duty Manager Pager: 1-866-206-6568 (w/in US)

International dialing: +1-601-960-9547 or +1-601-960-9548; PIN: 8662066568

Email address: ism@skytel.com

Enter your telephone number after the beeps including your area code followed by the # sign. The duty manager will return your page.

Table 9-2 ISM Escalation List

Undersea Systems Technical Support & Escalation Contacts					
	Support Role	**Office**	**Mobile**	**Home**	**Pager***
Barry Cameron	Pacific / Atlantic	908-234-3206	908-894-4866	908-684-8311	866-206-6568
Jimmy K. Huang	Pacific	671-649-8946	671-788-7066	671-647-4692	N/A
William De Paolis	Florida / Caribbean	908-234-3433	973-420-3494	973-386-9891	800-204-3822
Alan Toves	Technical Support Mgr	908-234-3209	973-216-5803	973-770-6578	800-203-2963
Larry Moskowitz	Tier-3 / Atlantic / Pacific	914-323-1021	732- 939-8795	914-323-1021	800-204-4393
Greg Hammonds	Tier-3 / Florida / Caribbean	908-234-3359	201-513-5017	610-559-0918	800-204-2971
Bob Wargo	Cable Protection	908-234-3280	973-906-6541	908-534-1779	N/A
Thomas McInerney	UCM Director	908-234-3344	201-707-5359	973-895-4332	N/A
Mark Welch	AVP Network Services	212-513-2002	732-447-3224	N/A	N/A

9.1.3. Service Method of Procedures (SMOP)

9.1.3.1. Introduction

This section provides additional information to support SMOPs created for International Undersea Cable & Cable Station Network activities. Specifically addressing Risk Factor, Customer Impact Guidelines and Cable Stations and related equipment.

SMOPs for International Undersea Cable & Cable Station Network activity should be processed as documented in Chapter 2 - Service Method of Procedures, of this handbook.

9.1.3.2. Determining Risk Factor

In addition to the items covered in Chapter 2, Risk Factor 2.5.2.4 the following has been prepared to address International Undersea Cable & Cable Station work activity and assessing the potential risk to the Network of High, Medium, or Low.

There are several criteria which are required to evaluate a work activity and its potential to negatively affect the Network. Chapter 4, Network Events Guidelines and Section 9.5 of this chapter lists the Risk Factor for each job as determined by the Subject Matter Expert (SME) for International Undersea Cable & Cable Station activities.

Risk Assessment Guidelines has been provided for your information. The SME for the technology will assist in answering any questions about work procedures, potential impact, and risk factors.

Table 9-3 Risk Factors

RISK FACTOR = HIGH 4 to 5		
Cable Stations	**Earth Stations**	**ISC**
Power Plant	Power Plants	Power Plants
Air Conditioning	Air Conditioning	Air Conditioning
Fiber Switching (logic)	Fiber Switching (logic)	1B Processor
NPE	Radio Switching (logic)	DCME
DACS	DACS	DACS
TTE	Antenna Systems	ASSET Bays
PFE		CNI RING
These elements were chosen for the high risk category due to the impact to service and the non-redundancy of the systems.		
RISK FACTOR = MEDIUM 2 to 3		
Cable Stations	**Earth Stations**	**ISC**
RC48	RC48	RC48
DDM1000	DDM1000	DDM1000
Other MUX	Other MUX	Other MUX
NCOE	HPAs	Signaling
	NCOE	TSI

RISK FACTOR = HIGH 4 to 5		
Cable Stations	**Earth Stations**	**ISC**
		DIF
		NCOE
These elements were chosen for the medium risk category due to the impact to service and the redundancy of the systems.		
RISK FACTOR = LOW 0 to 1		
Cable Stations	**Earth Stations**	**ISC**
Alarms	Alarms	Alarms
Light Guide Equipment	Light Guide Equipment	D4 Channel Bank
D4 Channel Bank	D4 Channel Bank	Stand By Generator
Stand By Generator	Stand By Generator	Restoration Equipment
Restoration Equipment	Restoration Equipment	
Radio Equipment	Radio Equipment	
These elements were chosen for the low risk category due to the impact to service and for the most part in the non-service path or effecting a single circuit.		

* The Risk Factor is Based on Total Capacity Affected.

9.1.3.3. Determining Customer Impact

When determining possible Customer Impact an activity could have on our customers, you will need to use the guidelines below. The Guidelines are shown in the two (2) tables below:

Customer Impact Guidelines for Priority Countries is used to determine impact, high, medium or low for the Priority Countries. List is determined by Region, per the Country Manager(s).

Customer Impact Guidelines for Other (Bilateral Networks, Alternate Transport Providers(ATPs)) is used to determine impact, high medium or low for 'Other' Networks.

Other in this case would be:

Any AT&T Bilateral Network **not** on the Priority Countries List

Customer Impact Guidelines for Priority Countries

Priority Countries	
Customer Impact	%Capacity Affected
HIGH = 5 to 3	10% or greater
LOW = 2 to 0	2% - 9%

Customer Impact Guidelines for Other (Bilateral Networks, ATPs)

Priority Countries/Networks	
Customer Impact	%Capacity Affected
HIGH = 5 to3	50% or greater
LOW = 2 to 0	49% or less

9.1.3.3.1. Table #4 Top 60 Priority Countries

CCD	CL Code	Country
54	AG	Argentina
61	AU	Australia
43	AS	Austria
NPA 242	BA	Bahamas
880	BJ	Bangladesh
32	BG	Belgium
55	BZ	Brazil
NPAs	CN	Canada
56	CH	Chile
86	CI	China
57	CL	Colombia
506	CR	Costa Rica

CCD	CL Code	Country
53	CU	Cuba
45	DK	Denmark
NPA 809	DR	Dominican Republic
593	EC	Ecuador
20	EG	Egypt
503	ES	El Salvador
33	FR	France
49	GE	Germany
30	GC	Greece
502	GT	Guatemala
504	HR	Honduras
852	HK	Hong Kong
36	HU	Hungary
91	II	India
62	IO	Indonesia
98	IX	Iran
353	IR	Ireland
972	IS	Israel
39	IT	Italy
NPA 876	JM	Jamaica
81	JP	Japan
82	KO	Korea
60	ML	Malaysia
52	MX	Mexico
31	NL	Netherlands
64	NZ	New Zealand
505	NG	Nicaragua

CCD	CL Code	Country
234	NR	Nigeria
47	NW	Norway
92	WP	Pakistan
51	PU	Peru
63	PH	Philippines
48	PD	Poland
48	PO	Portugal
7	RU	Russia
65	SI	Singapore
27	RA	South Africa (Rep of)
34	SP	Spain
46	SW	Sweden
41	SZ	Switzerland
886	TW	Taiwan
66	TH	Thailand
NPA 868	TR	Trinidad
90	TU	Turkey
380	UA	Ukraine
44	EN	United Kingdom
58	VE	Venezuela
84	VN	Vietnam

9.1.3.4. Cable Station Equipment Exclusion Waivers

9.1.3.4.1. Policy

Ask Yourself principles and procedures should normally be applied to all equipment in cable stations. However, due to the fact that much of the equipment in cable stations is owned by cable consortiums or other carriers, there is a slight potential for conflict between the desires of the owners and Ask Yourself. In the unlikely event such a conflict arises, the desires

of the equipment owners shall govern on the equipment they own and Ask Yourself procedures may be waived, *after approval by the ISM SME approving the SMOP.* In the case of common equipment serving both the consortium and AT&T (ie., Alcatel 1641 & Alcatel 1680 network cards, DSX cross connect frames), Ask Yourself shall govern.

9.1.3.4.1.1. Carrier - Consortium Interface

The demarcation between carrier (AT&T and OCC's) owned equipment and consortium owned equipment is different depending on the technology involved.

For SDH the demarcation is inside the Alcatel 1641 & Alcatel 1680 DACS. Specifically the electrical line cards interfacing with the NPE are consortium equipment. Other line terminating cards are owned by individual carriers, AT&T and the OCC's, depending upon whose domestic tail facilities they interface with.

For PDH the demarcation is the DSX-1 cross connect frame between RC 48D units facing the consortium owned ocean cable and those facing carrier owned domestic tail facilities.

9.1.3.4.1.2. Consortium Owned Undersea Cable Equipment

The following dedicated undersea cable equipment owned by cable consortiums which may have an exclusion waiver from Ask Yourself should conflict arise with the desires of the consortium. See the Policy in paragraph 9.3.4.1 for details.

- Fiber and power conductor from the cable station to the ocean

- Ocean cable Power Feed Equipment

- Ocean Ground Bed and Ocean Ground Return Cable

- Undersea Cable Line Terminating Equipment

- Network Protection Equipment

- Undersea Cable Transmission Measuring or Monitoring Systems and Equipment

- M34 Multiplexors Facing the Ocena Cable

- RC 48D Multiplexors Facing the Ocaean Cable

- Alcatel 1641 & Alcatel 1680 Electrical Cards Interfacing with the NPE

- Optical ADMs

- All Cableing Interconnecting the Above

- Alarm & Control Equipment Dedicated to the Above

9.1.3.4.1.3. Other Common Carrier Owned Equipment

OCC's may elect to construct their own domestic tail facilities into the cable station. All equipment on the carrier side of the demarcation which is interfaced with OCC owned domestic tail facilities is owned by the involved carrier (or possibly his customer). This equipment may be excluded from Ask Yourself should conflict arise with the desires of the OCC. In most cases this equipment will be identical to AT&T owned equipment interfacing with AT&T's domestic tail facilities. The only distinguishing feature is generally the ownership of the equipment and the domestic tail facilities it serves.

Some OCC requirements are carried to a distant AT&T-OCC interconnect point on AT&T facilities as a tariffed service. All equipment involved with providing this service is subject to Ask Yourself.

The following types of equipment may be owned by OCC's and interfaced to their domestic tail facilities.

- RC 48D multiplexors

- Alcatel 1641 & Alcatel 1680 line cards at 2.048, 155 gbs speeds, and 45mbs.

- Cabling interconnecting the above to the consortium interface or to the OCC owned domestic tail facility

- Cross connect frames dedicated to the OCC (usually the demarcation point for maintenance)

9.1.3.4.1.4. Common Equipment

The following kinds of equipment generally serves AT&T, the consortium and/or the OCC's. This equipment is subject to Ask Yourself unless it is totally dedicated to either an OCC or the consortium.

- Cross Connect Frames

- Alcatel 1641 & Alcatel 1680 network cards and 1641& 1680 bay framework

- Bay frame work, power supplies an other equipment common to a bay serving both AT&T and consortium and/or OCC owned equipment

- Office alarm and control systems

- Building environmental and security systems

- Common AC and DC power equipment and cabling

- Common fuse and breaker panel

- Building grounding systems

• Cable vaults

9.1.3.4.1.5. Other Equipment

All other equipment should be considered AT&T owned and subject to Ask Yourself. This includes all AT&T domestic tail fiber systems, multiplexors interfacing with AT&T domestic tail facilities, order wires and other telecommunication links for AT&T's sole use, etc.

9.1.3.4.1.6. Uncertainty

If uncertainty exists as to whether a particular piece of equipment or system is covered by Ask Yourself, assume that it is until the matter is clarified. Refer questions and interpretations to the appropriate SME.

9.1.4. Work Schedule Guidelines

9.1.4.1. Introduction

This section together with Section 3 - Work Schedule Guidelines ,Section 4- Network Events Guidelines and Section 9.5 provides supporting information for the 'Ask Yourself' - questions introduced in Section 1, Service Protection of this Handbook.

Question 5: Is it the right time to do the work?

The work schedule guidelines provided in this section will help you determine the appropriate time for performing network service to minimize potential impact on customers and network operations.

The decision of when to perform a service should be based on the impact that a process failure can have on our customers, not on how well we believe we can execute the change or the probability of process success. In addition, the impact of an unsuccessful execution of a planned activity on service, regardless of whether it is a routine operation, should weigh into the decision.

With these general principles in mind, this section gives guidelines for determining when to perform switching and signaling, facilities, power, and infrastructure activities. In this section, all times are UTC.

9.1.4.2. Primary Guidelines

1) All SMOPs that are prepared and generated for any work in a cable station must include the approval of an Undersea Cable SME, regardless of the type of work to be performed. There is no exception to this policy.

2) All work which is performed on Consortium owned equipment, Cable System equipment or OCC equipment including changes in service affecting databases, network element software, hardware configurations, and the environment surrounding International Undersea Cable & Cable Station elements must follow the maintenance windows outlined here:

Cable Region	Maintenance Window
Atlantic Region	23:00- 06:00 UTC
Pacific Region	16:00- 22:00 UTC
Carribean Region	06:00- 12:00 UTC
Central America East Region	06:00- 12:00 UTC
Central America West Region	16:00 - 22:00 UTC

3) All planned work that involves AT&T owned transport equipment or switching equipment which interfaces to the Under-sea Cable system should be done when the lowest traffic volumes are on the equipment. In order to determine the best time to plan work you will need to refer to the busy hour data for the specific countries which the equipment is serving. The most current data for making this deteriation can be found in the Capacity Utilization reports at : \\ \\gab200srvr04\cur

4) Once you access the site you will see a folder called capacity utilization reports. Open the folder and choose the report that you want to view. There are partial week reports called Cap_use_current, where you can see up through midnight (UTC) of the previous day. The full week reports are called Cap_use_week. Once you open the specific excel file use the drop down in cell B2 to select the specific countries the equipment is serving. This will provide you with the best data in UTC to make your decision.

For additional details on specific activities, refer to the Network Events Matrices in Chapter 4 and section 9.5. Any deviations from these Network Events Matrices tables must be reviewed on a case-by-case basis.

When preparing the SMOP associated with planned work, the involved parties should concur regarding the hours of work indicated for particular steps in the process. For example, some preliminary preparations that are not service impacting may be performed outside of the times indicated by the Capacity Utilization Reports at \\gab200srvr04\cur .

5) Only one part of an interdependent set will be placed at risk at any one time, e.g., one STP in a mated pair.

6) Concurrent work on more than one critical network element will not be per-mitted, e.g., only one switch or one DACS serving a World Region can be worked on at one time.

7) When performing work on two similar elements on the same night, at differ-ent markets/geographic areas in the country, the critical activity that might put the element at risk, e.g., boot, will be performed at different scheduled times.

8) Risk should be assessed based on the impact that a process failure can have on our customers, NOT on how well we believe we can execute the change or the probability of process success.

9) The impact a planned activity would have on service if not completed succcessfully must be determined in advance. For example, a single T1 change, if it failed, would have a low impact in domestic while an International Undersea Cable & Cable Station E1 failure could have a substantial impact.

*Exceptions to or discretion applied to these Work Schedule Guidelines will be made during the SMOP review process by the appropriate SME. All exceptions shall follow the exception request process which can be found at http://gnoc.web.att.com .

For work not directly addressed by these guidelines, the responsibility for ensuring that all involved parties concur with when and how the work is completed rests with the requesting party.

Any employee can challenge work they consider to be in violation of these guidelines.

UNRESOLVED CONFLICTS PERTAINING TO THESE GUIDELINES SHOULD BE ESCALATED TO THE NEXT LEVEL OF AUTHORITY. The driver of escalation should be the needs of serving our external customer, NOT internal hierarchy.

9.1.4.2.1. Table 9-5 Network Time Conversion

Network Time Conversion

GMT	NWT	EDT	EST CDT	CST MDT	MST PDT	PST
0000	1800	2000 AKA 8PM	1900 AKA 7PM	1800	1700	1600
0100	1900	2100 AKA 9PM	2000 AKA 8PM	1900	1800	1700
0200	2000	2200 AKA 10PM	2100 AKA 9PM	2000	1900	1800
0300	2100	2300 AKA 11PM	2200 AKA 10PM	2100	2000	1900
0400	2200	0000 AKA Midnight	2300 AKA 11PM	2200	2100	2000
0500	2300	0100 AKA 1AM	0000 AKA Midnight	2300	2200	2100
0600	0000	0200 AKA 2AM	0100 AKA 1AM	0000	2300	2200
0700	0100	0300 AKA 3AM	0200 AKA 2AM	0100	0000	2300
0800	0200	0400 AKA 4AM	0300 AKA 3AM	0200	0100	0000
0900	0300	0500 AKA 5AM	0400 AKA 4AM	0300	0200	0100
1000	0400	0600 AKA 6AM	0500 AKA 5AM	0400	0300	0200
1100	0500	0700 AKA 7AM	0600 AKA 6AM	0500	0400	0300
1200	0600	0800 AKA 8Am	0700 AKA 7AM	0600	0500	0400
1300	0700	0900 AKA 9AM	0800 AKA 8Am	0700	0600	0500
1400	0800	1000 AKA 10AM	0900 AKA 9AM	0800	0700	0600
1500	0900	1100 AKA 11AM	1000 AKA 10AM	0900	0800	0700
1600	1000	1200 AKA Noon	1100 AKA 11AM	1000	0900	0800
1700	1100	1300 AKA 1PM	1200 AKA Noon	1100	1000	0900
1800	1200	1400 AKA 2PM	1300 AKA 1PM	1200	1100	1000
1900	1300	1500 AKA 3PM	1400 AKA 2PM	1300	1200	1100
2000	1400	1600 AKA 4PM	1500 AKA 3PM	1400	1300	1200
2100	1500	1700 AKA 5PM	1600 AKA 4PM	1500	1400	1300
2200	1600	1800 AKA 6PM	1700 AKA 5PM	1600	1500	1400
2300	1700	1900 AKA 7PM	1800 AKA 6PM	1700	1600	1500

9.1.4.3. Activities Covered

9.1.4.3.1. General Activities Not Restricted

Installation of new equipment will be allowed during normal business hours as long as there is no contact or integration with working existing equipment or infrastructure systems that could potentially impact service. If unsure contact the SME for your technology for assistance in determining when to perform work. More specific examples are listed in Section 9.5.

9.1.4.3.2. Switching and Signaling

9.1.4.3.2.1. General

Certain activities may be performed during normal business hours under the direction of your support organization; however, for Switching and Signaling, all element related activities will be performed with concurrence, or as directed by the NRC.

1. In some technologies SSTE conversions may be started as early as 5:00 p.m. local time. This will be determined by your technical support supervi-sion. These conversions are not CNI Ring growth or change related. Full diagnostics and prove-in may be necessary at both ends of the signaling links involved.

2. The same maintenance flexibility applies to all 56k and 64k Links. This will be determined by your technical support supervision.

9.1.4.3.2.2. International Service

Work Performed in switches serving as International Undersea Cable & Cable Station Gateways (e.g., International Routing) with the potential to impact International Undersea Cable & Cable Station traffic, should be scheduled with consideration as to the countries served by the switch. Work performed in gate-way switches located on the East Coast could be scheduled earlier in the work window, while work performed in gateway switches located on the West Coast could be scheduled later in the work window. See the maintenace windows in Section 9.4.2 as well as the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations, also Table 9-5 Network Time Conversion for Network Time Conversion.

9.1.4.3.2.3. Change Notices

Modifying hardware or software and software updates requiring a boot will be done midnight to 6:00 a.m. Software and hardware changes not requiring a boot may be performed according to the information in Section 9.4.4.

9.1.4.3.2.4. STP-I Software Updates

STP-I Software Updates will be performed according to the specific application of the technology (e.g. domestic, International Undersea Cable & Cable Station, government, etc.) or as directed by the COE Technical Support Supervision (applies only to STP-I's).

9.1.4.3.2.5. Synchronization

Certain activities may be performed during normal business hours; however, all activities involving synchronization maintenance and trouble resolution will be performed with the concurrence of, or under the direction of the International Undersea Cable & Cable Station Network Synchronization Support/Sync-Maintenance Engineer.

9.1.4.3.3. Facilities

9.1.4.3.3.1. International Provisioning and Maintenance

T3 and Above

Work Allowable in locations serving specific World regions as specified by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines.

Work at the T1/E1 Level

For all work related to T1/E1 provisioning containing UCR code 'O' on the provvsioning documents, the ITSC must be notified prior to the start of the work activity. They will determine if a customer release is required and if the work will have to be done on off tour hours versus days. Notification should occur, whenever possisble, 14 days prior to the start of the work activities in order to allow time for customer notification and filing of Network Events as necessary.

DS1 or DS0 DS1 or DS0 level provisioning must be done with customer release anytime there is physical work performed on the Di-Group and/or multiple provisioning activity that will cause CGA level (two and one half second interruption or 480 ms with fast alarming) or greater impact. Examples of activities which are not expected to result in CGA's are B8ZS/AMI software optioning on low-speed RC48D circuit packs, T3 rolls, DACS IV cutovers, MUX rolls, etc.

9.1.4.3.3.2. Equipment Installation/Change Notices

Change notice activity on service carrying equipment will be performed during the hours specified in the SMOP associated with the change notice. All domestic DACS and Power change notices will be performed midnight to 6:00 a.m. DACS and

Power change notices performed on network elements which carry International Undersea Cable & Cable Station traffic must be coordinated with the International Undersea Cable & Cable Station Transport Servicing Center in order to minimize impact. This includes changes to the International Undersea Cable & Cable Station cables at both Submarine and domestic Cable Stations.

The following are some examples of work activities, see Section 4 for more specific examples.

- Work Allowable /Completed during time specified by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines.

- Removal of equipment where risk to in-service equipment exists

- Power modifications in the BDFB in regens or repeater sites

- Single DS3 work in the backplane of an in-service bay using DSX Cross Connect Equipment

- Power modifications in the BDFB in CO or Terminal Office

- DACS III/IV change notice activity

9.1.4.3.3.3. DACS/MUX

Work involving the Main Controller, Unit Controller, I/O Bay, Power Units, Center Stage or Disk/Tape drives and must be confined to the hours specified either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations. Work must start and complete within these hours.

Daily backups are done automatically via DEMS for all D3 and D4/512's. The optical cartridge should be changed between 12:00 and 1:00 p.m. daily, if the office is manned. Unmanned offices should be changed at least once a week. DACS 4/526 machines still need daily tape backups performed at the start of the day tour, but no later than 8:00 a.m. An exception to this requirement may be allowed during or after a restoration event when a database backup is warranted. Exception backups such as these will be directed by the Restoration Management Group.

International Service: Work performed in DACS frames that carry International traffic must be coordinated with the International Transport Servicing Center in order to minimize service impact.

Not more than one DACS frame will be worked on at the same time and/or at the same location. Multiple DACS frames can be worked on in the same location ONLY if the work on each DACS frame is successfully completed before beginning work on the next DACS frame. The I-NOC will analyze work requests to ensure geographical and sequential (in time) separation of DACS work. When work is being performed, the location and the ITSC will communicate on the SMOP operation.

9.1.4.3.3.4. Cable Mining

Cable mining in an in-service cable rack (racks carrying any power/transmission cables connected to in-service equipment) will be performed according to the time specified either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations. Work must start and complete within these hours. Cable mining is permitted during normal business hours if there is no service in the racks. Absolutely no climbing on in-service cable racks is permitted during the normal business day.

9.1.4.3.3.5. Microwave Radio

Radio activity that can be accomplished with a short term release (where the facility can be returned to service in five minutes or less), may be performed during normal business hours. Long term release activity will be according to the time specified either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations. Work must start and complete within these hours. Call your Radio SME if you have questions pertaining to this process.

9.1.4.3.3.6. Central Office Common Equipment

Routines or rearrangement to these equipment types will be performed during times specified either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations. Work must start and complete within these hours, e.g. timing supply sync. supply, and frequency supply.

9.1.4.3.3.7. Outside Plant Facilities

9.1.4.3.3.7.1 Planned Cable Intrusions (PCI)

There are several different types of cable activities in the International environment. PCIs on Undersea Cable which in the Domestic United States between the cable station and the beach are handled by the ISM. PCIs on Undersea Cable with in the a US territory are managed byt the local OSWF in conjunction with the ISM.

9.1.4.3.3.7.2 Fiber Repair

Repair of Undersea Cable must be coordinated through the ISM. The International Restoration operation Center (IROC) in Conyers should be contacted on 770-785-3600 to begin the restoration process and assignment of the ORLO.

9.1.4.3.3.7.3 Lightguide Cable Installation and Removal

Lightguide cable installation and removal in common conduit systems containing more than one Lightguide cable will be done in accordance with the time specified by either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations. Work must start and complete within these hours. All prep work, including cable identification, cable marking, and removal after the cut may be done at any time.

9.1.4.3.3.8. Power

9.1.4.3.3.8.1 Undersea PFE Maintenance

All Undersea PFE Maintenance will require coordination and concurrence with the distant end maintenance authorities. All SMOPS related to PFE work can only be approved by the ISM SMEs.

9.1.4.3.3.8.2 AC/DC Power Maintenance, Construction and Removal

In the continuing effort to improve and refine the power process, major revisions have been made in the Network Events Power Matrix. With input from the Power Technical Support Group, Power Generation Group, Power Development, Maintenance Standards, and Power Maintenance Service Application Team, the guidelines allow for better time and resource management for completion of the current capital initiatives.

The following considerations have been made:

- To facilitate locating activity references, planned activities have been arranged by:

  - Routines

  - DC power

  - AC power

  - Shared activities

- To assist in managing power related work's potential impact on our customers, the building categories have been expanded to:

  - Critical Top 145 Offices

  - Terminal Offices

  - Regens and Radio Repeaters

  - Critical/Terminal Offices

  - Earth Stations

  - Cable Stations

  - All Other Locations

- Time guidelines have been revised to better reflect the potential impact to our customers versus the cost of performing the work.

- While continuing to maintain acceptable risk levels, the guidelines have been revised to effectively use the extended Battery Hour Reserve gained through capital investment projects.

- The engineered protection provided by DC power plants for the facility and switching equipment influenced the guideline revision for AC power.

The guidelines for engine runs with full load transfer were revised to take advantage of the availability of trained personnel and commercial power in the event of problems. The new guidelines also allow for transfer before and after peak Network hours (specified either by reviewing the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations).

9.1.4.3.3.8.3 Notice Regarding Power/Technology SMOP Transmission/Concurrence

For the purpose of power-related SMOP review and concurrence, the following instructions indicate the appropriate SME involvement. In either of the following cases only one SMOP must be prepared.

- For work on the 'equipment side' of the BDFB - up to and including the connection of equipment to the BDFB - the appropriate technology SME will review and concur with the SMOP. For example, the DACS/MUX TSDG would review and concur with the SMOPs which involve the connection of a new DDM1000 bay to the BDFB; also, the 5ESS SME would review and concur with SMOPs which involve the connection of 5ESS equipment to the BDFB.

- For work on the 'power plant side' of the BDFB - including main feeder BUS connections - the Power SME will review and concur with the SMOP.

9.1.4.3.3.8.4 Infrastructure General Guidelines

Infrastructure equipment in direct or indirect support of operating network equipment, switching, and/or transport will be given the same urgency consideration as power. Any planned maintenance, construction, and/or removal activity that may negatively impact service must be performed.

All such activities will require an approved SMOP as specified in AT&T Practice 790-100-421AC and comply with the Network Events Process.

9.1.5. Network Events Guidelines

9.1.5.1. Introduction

This section is meant as a supplement to Chapter 4 - Network Events Guidelines which provides the basic process for Network Event reporting and approval.

Network Event requirements specific to International Undersea Cable & Cable Station is addressed in this section.

9.1.5.2. Network Events Process

9.1.5.2.1. Process and Route SMOP/NE Request to CoE or HQ/SME

Network Event requirements for International Undersea Cable & Cable Station - Process and Routing your SMOP/ NE Request to the appropriate personnel may include personnel from the International Undersea Cable & Cable Station Techniccal Support Group, as well as the specific technology SME. It is necessary that all personnel/offices involved be notified in this portion of the Network Events process.

9.1.5.2.2. Perform Conflict Resolution

Due to the nature of International Undersea Cable & Cable Station traffic, Potential Customer Impact (high, medium, or low) should be determined by the possibility of blocked calls and the availability of traffic reroutes and/or facility restorations to the destination country.

Potential customer impact measures affected capacity, % restorable and blocked calls, if a process failure were to occur during the implementation of a work activity. For guidelines on determining customer impact on the International Undersea Cable & Cable Station Network, Determining Customer Impact of this handbook.

9.1.5.2.2.1. GNOC/COE Network Events Oversight

Network Event data is submitted to the GNOC/COE in order to allow oversight across the entire AT&T International Undersea Cable & Cable Station Network. The ultimate status of any event is dependent upon this GNOC/COE oversight.

At the time work is to be performed, notification must be given to the appropriate COE surveillance group for the equipment affected. Chapter 1 Service Protection for the contact numbers.

9.1.5.3. Network Event Criteria

The following information is intended to assist in the determination of whether work activity qualifies as a Network Event. The following matrices are intended to be a basic guideline. It is difficult to simply categorize the complex and varied work activities that occur in our Network. If you have any questions or are unsure about the guidelines, contact the SME for your technology .

9.1.5.3.1. Transport, Power, and Outside Plant

The following matrices summarize the work schedule guidelines requirement for out-of-hours work. Generally, those work activities which can be performed during normal business hours will not qualify as a Network Event. Refer to Section 9.4.2 to determine the appropriate maintenance window. **All times are UTC.**

9.1.5.3.2. Other Common Carrier Owned Equipment

OCC's may elect to construct their own domestic tail facilities into the cable sta-tion. All equipment on the carrier side of the demarcation which is interfaced with OCC owned domestic tail facilities is owned by the involved carrier (or possibly his customer). This equipment may be excluded from Ask Yourself should conflict arise with the desires of the OCC. In most cases this equipment will be identical to AT&T owned equipment interfacing with AT&T's domestic tail facilities. The only distinguishing feature is generally the ownership of the equipment and the domes-tic tail facilities it serves.

Some OCC requirements are carried to a distant AT&T-OCC interconnect point on AT&T facilities as a tariffed service. All equipment involved with providing this ser-vice is subject to Ask Yourself.

The following types of equipment may be owned by OCC's and interfaced to their domestic tail facilities.

- RC 48D multiplexors

- Alcatel 1641 & Alcatel 1680 line cards at 2.048, 155 gbs speeds, and 45mbs.

- Cabling interconnecting the above to the consortium interface or to the OCC owned domestic tail facility

- Cross connect frames dedicated to the OCC (usually the demarcation point for maintenance)

Note 1. Some consortium owners who are also an OCC and backhaul provider are leasing enclosed or caged floor space to house their backhaul transport equipment in the cable landing station. There are typically AT&T provided interbay tie cables and patch panels to allow connection between the OCC enclosure and the undersea cable system thereby reducing the need for AT&T to enter the OCCs enclosure or for the OCC staff to be on the cable station floor. These tie cables can be carrying STM-1 through STM-64 signals, therefore intrusive testing must be done only at the direct requestor with permission of the OCC. Depending upon access arrangements it may be necessary to dispatch an AT&T OSWF Technician to provide an OCC Technician access to their equip-ment.

Note 2. More and More OCC carriers are connecting their BH facility directly to the wave of the undersea cable system. The only test access for those that direct connect to the undersea cable system may be at the LGX.

9.1.5.3.2.1. Network Events Matrix - General Activities

Please see Chapter 4 forGeneral Activities guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.1 Network Events Matrix - Outside Plant Activities

Please see Chapter 4 forOutside PlantActivities guidelines if a time restriction is indicated please use either the mainte-nance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \
\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.2 Network Events Matrix-Lightguide Terminal/Regen Equipment: Maintenance

Table 9-6. Lightguide Terminal/Regen Equipment: Maintenance

Planned Activity (Notes 1, 2, 3 and 4)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Single DS3 work in the backplane of an in-service bay using DSX cross connect equipment	3	YES	YES
Single DS3 work in the backplane of an in-service bay using DACS cross connect equipment (Note 3)	1	YES	NO
Multiple DS3 work in the backplane of an in-service bay using DSX cross connect equipment	3	YES	YES
Multiple DS3 work in the backplane of an in-service bay using DACS cross connect equipment (Note 3)	1	YES	NO
139 mb cable troubles with customer complaints	1	NO	NO
Cleaning optic connectors on in-service equipment	3	YES	YES
Scheduled equipment "ROUTINES" on in-service equipment where NO CUSTOMER SERVICE jeopardy exists.	1	NO	NO
Includes:			
Filter changes in fan units	1	NO	NO
Voltage readings of in-service power units	1	NO	NO
Laying cable in rack over in-service equipment	1	YES	NO see note 4
Removing cable in rack over in-service equipment	3	YES	YES
Any activity on non service fibers in the interconnect cabinets (LSCIE, LSCIT, LGX)	1	YES	NO
Testing spare fibers that are not in interconnect cabinets	1	NO	NO
Bonding and Grounding Activity. No sheath entry and UCB1 end cap re-moval only	1	NO	NO
LGX and Pre-terminated Cable Installation over or adjacent to working equipment	2	YES	YES

Planned Activity (Notes 1, 2, 3 and 4)	Risk Factor	N.E. Report Req'd	* TIME Restriction
1. Replacement of equipment that has interrupted, impaired, or degraded customer service does not require a NETWORK EVENT. These activities may require a switch or overhead restoration (short term). Reference for switching activity is TSG/FIBER electronics flash bulleting #43-4.			
2. Replacement of equipment that is necessary to provide customer service (e.g., order wires, OSS, and surveillance equipment) does not require a NETWORK EVENT.			
3. Reroute the QUAD on overhead restoration facilities.			
4. Any Item with no time restriction must have protection line available for switching.			

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

9.1.5.3.2.1.3 Network Events Matrix-Lightguide Terminal/Regen Equipment: Restoration Access Modification or Retirements

Table 9-7. Lightguide Terminal/Regen Equip: Restoration Access Modification or Retirements

Planned Activity (Notes 1, 2, and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Mounting AIS Panel	1	NO	NO
Cable Placement:			
AIS Protection bus cable	1	YES	NO
GTP Cables	1	NO	NO
Misc. Alarm cables	1	NO	NO
Cable & Plug connections	1	YES	NO
Protection QUAD Initialization	1	YES	NO
Transmission Tests	1	YES	NO
TCC/PME Modifications	1	YES	NO
Removal of cabling over racks which contain in-service equipment	3	YES	YES

Planned Activity (Notes 1, 2, and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Removal of equipment where risk to in-service equipment exists	3	YES	YES
1) THE REQUIRED DOCUMENT FOR INSTALLATIONS OR MODIFICATIONS IS THE LT-IEH 342B.			
2) When database personnel are required for a procedure, schedule the database group prior to submitting the NETWORK EVENT.			
3) Before the TOC has power removed for any modification activities, call Telemetry Maintenance Module for release.			

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

9.1.5.3.2.1.4 Network Events Matrix-Lightguide Terminal/Regen Equipment: New Routes or WDM

Table 9-8. Lightguide Terminal/Regen Equip: New Routes or WDM

Planned Activity (Notes 1, 2 and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Mounting framework/bays/shelves (TCC/PME/DQA/DLTA)	3	YES	NO see note 3
Laying cable in racks over in-service equipment	1	YES	NO see note 3
Connect power cable to BDFB			
1. CO or Terminal Office	5	YES	YES
2. Regens	3	YES	YES
DSX3/DACS Cabling	1	YES	NO
Interbay cabling (maintenance, protection ISRM bus's, etc.)	1	NO	NO
GTP/Telemetry cabling	1	YES	NO
Insert fuse in BDFB	1	NO	NO see note 3
Installation of circuit packs:			
TCC/PME circuit packs	1	NO	NO
DQA/DLTA circuit packs	1	NO	NO
Acceptance Testing/Loopback:			
Continuity Tests/Power tests	1	NO	NO

Planned Activity (Notes 1, 2 and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Transmission tests	1	NO	NO
Fiber Testing:			
In-service fibers	3	YES	YES
Spare fibers	1	YES	NO
Acceptance testing end-to-end:			
Equip line repeater bay/LRBC	1	NO	NO
Measure optical power	1	NO	NO
Installation LB-O's	1	NO	NO
Fiber connect activity in an interconnect cabinet (LSCIE, LSCIT, LGX) Spare Fibers Only	1	YES	NO see note 3
Insertion of WDM filters	3	YES	YES
System Configuration	1	NO	NO
Database construction/download	1	NO	NO
Database acceptance testing	1	NO	NO
1) The required document for Installations or Modifications is the LT-IEH 342B. (LT IEH Network Sytems Installation Engineering Handbook)			
2) When database personnel are required for a procedure, schedule the database group prior to submitting the NETWORK EVENT.			
3) Any Item with no time restriction must have protection line available for switching.			

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

9.1.5.3.2.1.5 Network Events Matrix-Lightguide Terminal/Regen Equipment: Augments and WDM

Table 9-9. Lightguide Terminal/Regen Equipment: Augments and WDM

Planned Activity (Notes 1, 2 and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Mounting bay/shelves with no contact to working equipment exists	1	YES	NO see note 3
Laying cable in racks over in-service equipment	1	YES	NO
Connect power cable to BDFB			
1. CO or Terminal Office	5	YES	YES
2. Regens	3	YES	YES
DSX3/DACS cabling (telemetry, ISRM maintenance, protection)	1	YES	YES
Insert fuse in BDFB	1	YES	NO
Fiber Testing:			
1. In-service fiber	3	YES	YES
2. Spare fibers in interconnect cabinets	1	YES	NO
3. Spare fibers that are not in interconnect cabinets	1	YES	NO
Insertion of WDM filters	3	YES	YES
Acceptance testing end-to-end:			
1. Equip line repeater bay/LRBC	1	NO	NO
2. Measure optical power	1	NO	NO
3. Installation LB-O's	1	NO	NO
Fiber Connect/Activity in an interconnect cabinet (LSCIE, LSCIT, LGX)	1	YES	NO- see note 3
System configuration	1	NO	NO
Database construction/download	1	NO	NO
Database acceptance testing	1	NO	NO
1) The required document for Installations or Modifications is the LT-IEH 342B. (LT IEH Network Sytems Installation Engineering Handbook)			
2) When database personnel are required for a procedure, schedule the database group prior to submitting the NETWORK Event.			
3) Any Item with no time restriction must have protection line available for switching.			

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

9.1.5.3.2.1.6 Network Events Matrix-Lightguide Terminal/Regen Equipment: 417 mb to 1.7 gb Upgrades

Table 9-10. Lightguide Terminal/Regen Equipment: 417 mb to 1.7 gb Upgrades

Planned Activity (Notes 1, 2 and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Mounting Shelves	1	YES	NO
Power Modification:			
Any connections in BDFB:			
1. CO of Terminal Office	5	YES	YES
2. Regens	3	YES	YES
Connections and fuse at TCC/PME	1	YES	NO
Connections in protection bay	1	YES	NO
Connections in service bays	1	YES	YES
Cabling/laying cable in racks over in-service equipment	1	YES	NO see note 3
Cabling/connect into LG bays:			
DSX3/DACS cabling	1	YES	YES
Interbay cabling (except 417 line)	1	YES	NO see note 3
GTP/Telemetry cabling	1	YES	NO
Installation of circuit packs	1	NO	NO
Acceptance testing/loopback:			
Power tests	1	YES	NO
Transmission tests	1	YES	NO
Switch tests	1	YES	NO
TCC/PME tests	1	YES	NO
Alarm & Miscellaneous Modification	1	NO	NO
Upgrade MOP:			
Protection upgrade procedure	3	YES	YES
Service upgrade procedure	3	YES	YES
End-to-End testing:			

Planned Activity (Notes 1, 2 and 3)	Risk Factor	N.E. Report Req'd	* TIME Restriction
Transmission test	1	YES	NO
Database Construction/Download:			
Database acceptance testing	1	NO	NO
(Note 2)	1	NO	NO
1) The required document for Installations or Modifications is the LT-IEH 342B. (LT IEH Network Sytems Installation Engineering Handbook)			
2) When database personnel are required for a procedure, schedule the database group prior to submitting the NETWORK Event.			

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance window.

9.1.5.3.2.1.7 Network Events Matrix-DACS I, II, CEF

Please see Chapter 4 for DACS/CEF Activities guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \ \gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.8 Network Events Matrix - DACS/MUX

Please see Chapter 4 DACS/MUX Activities guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \ \gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.9 Network Events Matrix - Radio Activity

Please see Chapter 4 for Radio Activities guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \ \gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.10 Network Events Matrix-Power Activity

Please see Chapter 4 for Power Activity guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \ \gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.11 Network Events Matrix - Alarms

Please see Chapter 4 for Alarms guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.12 Network Events Matrix - International Undersea Cable & Cable**Station**

Table 9-11. Provisioning

	(Note 1) Planned Activity	Risk Factor	Request N.E. Report	* TIME Restriction
1	Single DS1 level work with customer release	0	NO	NO
2	DDM-1000 B8ZS/AMI option setting	0	NO	NO
3	DS3 provisioning adds and disconnects	0	NO	NO
4	DS3 provisioning changes involving DACS III cross-connects only	0	NO	NO
5	DS3 provisioning changes involving DSX-3 patching or equipment changes	0	NO	YES
6)	TMAS equipment database construction	0	NO	NO
7)	Equipment alarm verification	0	NO	NO
8)	Single T3 recabling at DACS III	1	YES	YES
9)	DDM-1000 modifications, including C-bit changes	0	NO	YES
10)	Fiber rolls and reroutes	5	YES	YES
11)	Project related work without other specified hours	Note 2	YES	YES
	1) Work involving SYNC at the T1 or T3 level is a NE to be performed 10 p.m. to 6 a.m.			
	2) Consult SME for project being worked.			

• If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance window.

Table 9-12. Signaling Provisioning

Planned Activity	(Note 1)	Risk Factor	N.E. Report Request	* TIME Restriction
1	CCITT7 Data Link Change	1	NO	NO
2	CCITT7 Data Link Re-arrangement	3	NO	YES
3	Facility or circuit roll removing 10% or more of the circuits to a country	3	YES	YES
4	Facility and Circuit Roll removing less than 10% of the circuits to a country	2	NO	YES
5	CCITT5 to CCITT7 TUP or ISUP conversion removing more than 10% of the circuits to a country	3	YES	YES
6	CCITT5 to CCITT7 TUP or ISUP conversion removing less than 10% of the circuits to a country	2	NO	YES
7	CCITT7 TUP or ISUP Compatibility testing	1	NO	NO
8	Change TDIU value of in-service DIU that removes 10% or more of the circuits to a country	4	YES	YES
9	Change TDIU value of in-service DIU that removes less than 10% of the circuits to a country	2	NO	NO
10	New CCITT7 TUP or ISUP implementation	1	NO	NO
1) An activity has the potential to cause an AT&T Customer Affecting Incident if 10% of the circuits are Out of Service and one or more calls are blocked.				
2) Consult SME for project being worked.				

- If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

Table 9-13. Routing Recent Changes

Planned Activity	(Note 1)	Risk Factor	N.E. Report Request	* TIME Restriction
1	Conversion of a country to ECOS	4	YES	YES
2	New Service implementation (ists-csr, cst)	3	YES	YES
3	Major Numbering Plan change	4	YES	YES

Planned Activity	(Note 1)	Risk Factor	N.E. Report Request	* TIME Restriction
4	New country/Carrier Add	4	YES	YES
5	Acceptable Digit Count adds or deletes	4	YES	YES
6	CCITT7 TUP or ISUP Testing	1	NO	NO
7	Adding or Deleting Trunk Sub Groups (Note 3)	2	NO	YES
8	Rehome of a Country (Note 3)	3	YES	YES
9	Allocation change	2	NO	YES
10	Code Screening	3	NO	YES
1) An activity has the potential to cause an AT&T Customer Affecting Incident if 10% of the circuits are Out of Service and one or more calls are blocked.				
2) Consult SME for project being worked.				
3) Problems with these activities can be controlled by the International Undersea Cable & Cable Station Network Operations Center.				

- * If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance window.

Table 9-14. DCME Activity (Provisioning/Maintenance)

Planned Activity	(Note 1)	Risk Factor	N.E. Report Request	* TIME Restriction
1	Circuit pack change with spare terminal or standby pack	1	NO	NO
2	Circuit pack change with no spare terminal or standby pack	2	NO	YES
3	Dynamic Load control testing	1	NO	YES
4	Software or Firmware upgrade	3	YES	YES
5	IAT Packet Stream re-provisioning that requires removal of 10% or more of the circuits to a country	2	YES	YES
6	IAT Packed Stream re-provisioning that requires removal of less than 10% of the circuits to a country	2	NO	YES
1) An activity has the potential to cause an AT&T Customer Affecting Incident				

Planned Activity	(Note 1)	Risk Factor	N.E. Report Request	* TIME Restriction
if 10% of the circuits are Out of Service and one or more calls are blocked.				
2) Consult SME for project being worked.				

• If yes please use the capacity utilization reports \\gab200srvr04\cur to determine the appropriate time to perform the work or the maintenance windows.

9.1.5.3.2.1.13 Network Events Matrix - Building Infrastructure

Please see Chapter 4 for Building Infrastructure guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

Switching and Signaling

Please see Chapter 4 for Switching and Signaling guidelines if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.14 Network Events Matrix **-** Synchronization

Please see Chapter 4 for Synchronization Activities Guidelines . if a time restriction is indicated please use either the maintenance windows in Section 9.4.2 Primary Guidelines or by reviewing the data in the Capacity Utilization Reports at \\gab200srvr04\cur for Busy Period Matrix Service Considerations to determine the appropriate time to preform the work.

9.1.5.3.2.1.15 Network Events Matrices - MMOC Activities Guidelines

Please see Chapter 4 for MMOC Activities Guidelines . These are RECOMMENDED guidelines. However, a customer release MUST be obtained before performing any Network Event.

10. Web Hosting Data Centers

10.1. Introduction

This section has been incorporated to support the implementation of Ask Yourself and Network Events/Change Management Process into the AENS (AT&T Enhanced Network Services) Web Hosting environment. The information supplied herein is intended to address work items specific to AENS Web Hosting arena.

A number of work activities are uniquely characteristic of the Web Hosting environment. These include Routers (Cisco), Switches (Foundry and Alteon), Firewalls (Checkpoint and Cisco), infrastructure support servers and various types of managed Enterprise Hosting servers (Sun, Compaq, HP, etc).

Web Hosting Centers are managed by the Network Operation's team but in some cases the customer's in these centers are cared for by Customer Care (the GCSC). A partnership must exist where Operations notifies the GCSC Operation's Center of the planned maintenance activities so the GCSC may properly support their Customers. The contact number for the Alpharetta GCSC Team is (800) 876-2373, Option 2

10.2. Service Protection

The goal is to ensure that all employees have the necessary information to provide improved service and/or new capability to our customers.

There are ten "Ask Yourself" questions that highlight checkpoints that must be passed before proceeding with any customer-affecting or service-affecting work.

This is accomplished by asking whether "YES" can be answered to a question. If the answer is "NO", the job should be stopped and the problem resolved before resuming work.

The Ask Yourself Principles can be found in Section 1 of the Ask Yourself Handbook AT&T Practice ATT-002-200-715. Select "Ask Yourself Training Manual" and then Chapter 1 "Service Protection".

10.2.1. Index of AENS Technologies & Support

Technology	Description	Type of Service	Tier 1 Support	Tier II Support	Tier III Support
Web Servers	Operating Systems - AT&T Managed and Customer Managed Web Hosting Servers	Systems	Alpharetta GCSC	ALPHARETTA GCSC	ALPHARETTA GCSC
				ALPHARETTA GCSC	Vendor
				IDC Technician	
Web Applications	Applications - AT&T Managed Web Hosting Servers	Systems	Alpharetta GCSC	ALPHARETTA GCSC	ALPHARETTA GCSC

Technology	Description	Type of Service	Tier 1 Support	Tier II Support	Tier III Support
				ALPHARETTA GCSC	Vendor
				IDC Technician	
Business Ready Dedicated Hosting	Multiple Sites per Server - Low-end Dedicated Offer in Mesa IDC	Systems	Alpharetta GCSC	ALPHARETTA GCSC	ALPHARETTA GCSC
				ALPHARETTA GCSC	Vendor (ASPRE)
				IDC Technician	
WorldNet Mail Relay	AT&T WorldNet & AENS Hosted Web Mail Relay Services	Systems	Alpharetta GCSC	ALPHARETTA GCSC	ALPHARETTA GCSC
Instant Messenger	AT&T WorldNet Instant Messaging Infrastructure	Systems	Alpharetta GCSC	ALPHARETTA GCSC	AT&T Labs Service Dev.
DNS	AENS Hosted Web and Leased Line Domain Name Services	Systems	Alpharetta GCSC	ALPHARETTA GCSC	ALPHARETTA GCSC
ICDS - Server	Intelligent Content Distribution Cache Servers	Systems	Alpharetta GCSC	ALPHARETTA GCSC	AT&T Labs Service Dev.
Portal	AENS Customer Portal	Systems	Alpharetta GCSC	ALPHARETTA GCSC	AT&T Labs Service Dev.
				IDC Technician	R & D
UVS	Ultra Availability Storage	Systems	Alpharetta GCSC	ALPHARETTA GCSC	Alpharetta GCSC
				IDC Technician	
DPS	Data Center Environmental Alarms	Environmental	Conyers Telemetry COE	Conyers Telemetry COE	Vendor (DPS)
			DPS	IDC Technician	

Technology	Description	Type of Service	Tier 1 Support	Tier II Support	Tier III Support
BENS	British Enhanced Network Services Data Center	International	Alpharetta GCSC	IDC Technician	ALPHARETTA GCSC
					Vendor
JENS	Japan Enhanced Network Services Data Center	International	Alpharetta GCSC	IDC Technician	ALPHARETTA GCSC
					Vendor
CENS	Canada Enhanced Network Services Data Center	International	Alpharetta GCSC	IDC Technician	ALPHARETTA GCSC
					Vendor
Arsenal	Customer Server Back-up / Restore Services	Partnered	Alpharetta GCSC	ALPHARETTA GCSC	Vendor (Sun Arsenal)
			Veritas		
Firewall	AT&T Managed Web Firewall Services and Load Balanced Web Firewall Services	Partnered	Alpharetta GCSC	Verisign Partner	Vendor
				SINGAPORE GCSC (VIA ALPHARETTA GCSC)	
IDS	AT&T Managed Intrusion Detection Service	Partnered	Alpharetta GCSC	Verisign Partner	Vendor
				SINGAPORE GCSC (VIA ALPHARETTA GCSC)	
Secure Networks	AT&T Managed VPN - Token and Host to Host	Partnered	Alpharetta GCSC	Verisign Partner	Vendor
				SINGAPORE GCSC (VIA ALPHARETTA GCSC)	
SecureBuy	AT&T Managed and Customer Managed Web Backup Services	Partnered	Alpharetta GCSC	ALPHARETTA GCSC	N/A

Technology	Description	Type of Service	Tier 1 Support	Tier II Support	Tier III Support
Storage Networks	AT&T Managed and Customer Managed Web Mass Storage Services	Partnered	Alpharetta GCSC	Vendor (SNI - Storage Networks Inc.)	Vendor (SNI - Storage Networks Inc.)
TIG - Technology Integration Group	3rd/4th Party Web Server Management - Outsourced	Partnered	Alpharetta GCSC	Vendor (Site-Lite)	Vendor (TIG)
				IDC Technician	
ICDS - Switch	Intelligent Content Distribution Global Load Balancing Switches	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	AT&T Labs Service Dev.
OC-192	AT&T OC-192 Backbone Network	Network	Alpharetta GCSC	CBB Second Tier Bridgeton MO	CBB Third Tier Bridgeton MO
				SONET Fiber Group	
CERFNet Backbone	Legacy AS1740 Common Backbone	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	CBB Third Tier Bridgeton MO
				LNS	
				CORE	
CERFNet Leased Line	Legacy AS1740 Leased - Line, Frame Relay	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	CBB Third Tier Bridgeton MO
				LNS	
				CORE	
AENS Common	AENS Common Servers and Network Equipment	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	ALPHARETTA GCSC
					Vendor
Data Center Common	Data Center Infrastructure Equipment	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	ALPHARETTA GCSC
					Vendor
ANX	Automotive Network Exchange Leased - Line Extranet	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA ALPHARETTA GCSC)	CBB Third Tier Bridgeton MO
				LNS	

Technology	Description	Type of Service	Tier 1 Support	Tier II Support	Tier III Support
Alternate ISP	Muti-homed Internet Backbone Access for Web Customer	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA AL-PHARETTA GCSC)	CBB Third Tier Bridgeton MO
ANBS	AT&T Network Based Firewall for MIS Customers	Network	Alpharetta GCSC	SINGAPORE GCSC (VIA AL-PHARETTA GCSC)	CBB Third Tier Bridgeton MO
				CBB Second Tier Bridgeton MO	

10.2.2. Web Hosting Technology Work Centers

10.2.2.1. Customer Care (GCSC) Operations Center:

(The Alpharetta GCSC is a 24 x 7 operation and is staffed at all times)

Alpharetta GCSC

AT&T
300 North Point Parkway
Alpharetta, Georgia 30005
(888) 455-5012

http://managedhosting.web.att.com

fax: 770-750-0112

rm-managedhostingo@ems.att.com

10.2.2.2. Network Operations' Domestic Internet Data Centers

Name	Location	Hotline Number	Duty Pager Number	Emergency Back-up Number
Allen Data Center Dallas-Ft Worth, TX (dal1)	900 Venture Dr, Allen, TX 75013	(214) 547-3249	(214) 581-4630	(214) 547- 1635
Ashburn Data Center Washington, D.C. (wdc1)	21571 Beaumeade Circle, Ashburn VA 20147	(703) 726-3300	(888) 602-0095	(703) 729- 7216
Hawthorne Data Center Los Angeles, CA (lax1)	2301 W.120th Street, Hawthorne, CA 90250	(323) 781-1140	(323) 699-1073	
Lithia Springs Data Center Atlanta, GA (atl1)	375 Riverside Pkwy, Suite 100, Lithia Springs, GA 30122	(770) 819-3700	(770) 524-5126	(678) 945-8048
Lisle Data Center Chicago, IL (chi1)	4513 Western Avenue, Lisle, IL 60532	(630) 810-6893	(800) 258-5469, pin # 9116831	(630) 719-9728
Lynnwood Data Center Seattle, WA (sea1)	17300 Highway 99, Lynnwood, WA 98037	(425) 835-7750	(425) 418-4847	(425) 381-9033
Mesa Data Center Phoenix, AZ (phx1)	1301 W. University Drive, Mesa, AZ 85201	(480) 844-6670	(480) 205-2359	(480) 205-2359
NYC Data Center New York, NY (nyc2)	811 10th Ave. New York, NY	(212) 903-6154	(800) 759-8888, pin # 9116691	(212) 903-6244
Orlando Data Center Orlando, FL (orl1)	6031 S. Rio Grande Ave, Orlando, FL 32809	(407) 858-5200	(888) 602-0089	(407) 826-7446
Piscataway Data Center (Greater NYC area in NJ)	3 Corporate Drive, 3rd Floor, Piscataway NJ 08854	(732) 733-9060	888-630-0241 8886300241@myairmail.com	888-617-8748 888-617-8748@myairmail.com
Redwood City Data Center (San Francisco area) Redwood City, CA (rwc1)	3175 Spring Street, Redwood City, CA 94063	(650) 780-1300	(650) 424-7589	(650) 364-0759
San Diego Koll Data Center San Diego, CA (san2)	5732 & 5738 Pacific Center Blvd, San Diego, CA 92121	(858) 638-8288	(888) 653-2870 or text 8586532870@amsmsg.net	(858) 232-5942
Secaucus Data Center (Greater NYC area in NJ) Secaucus, NJ (nyc3)	15 Enterprise Avenue, Secaucus, NJ 07094	(201) 330-5136	(800) 759-8888, pin # 2580101	(201) 864-8829
Watertown Data Center (Greater Boston area) Watertown, MA (bos1)	480 Arsenal Street, Building B, Watertown, MA 02472	(617) 972-7139	(888) 858-7243, pin 104699	(617) 612 2300

Name	Location	Hotline Number	Duty Pager Number	Emergency Back-up Number
Dallas Data Center (Greater Dallas Area)	11830 Webb Chapel, Suite 200, Dallas, TX 75234	(972) 247-0672	(972) 229-1044 9722291044@arch wireless.net	(972) 620-6651
Irvine Data Center	2681 Kelvin Ave., Suite100, Irvine, CA 92614	(949) 221-1921	(949) 474-8590	(949) 474-8590
San Jose Data Center	400 Holger Way, San Jose, CA 95134	(408) 493-8828	(408) 699-2262	(408) 750-0064
Oakbrook Data Center (Greater Chicago Area)	1000 Commerce Drive, Oakbook, IL	(630) 573-5583		(630) 573-5616

10.2.2.3. Network Operations' MoW Data Centers

MoW Web Hosting Data Centers:

Market	City	Country	Address
EMEA	Amsterdam	Netherlands	Johan Huizingalaan 759 - 1006 VH Amsterdam, The Netherlands
EMEA	Bangalore	India	111/112, EPIP, Whitefield, Hoody, Bangalore, Karnataka, India - 560066
EMEA	Birmingham	England	Ravensbank Drive, Redditch, Worcestershire B98 9AY
EMEA	Frankfurt	Germany	Eschborner Landstrasse 110, 60489, Frankfurt AM Main, Germany
APAC	Hong Kong	Hong Kong	15th Floor, Mega iAdvantage, 399 Chaiwan Road, Hong Kong
EMEA	London	England	Sovereign house,227, Marsh Wall,London, E14 9SD.
EMEA	Nice	France	51, rue Henri Laugier ZA des Trois Moulins, 06600 Antibes
EMEA	Paris	France	20-22 rue des Gardinoux,Batiment E501,93534 Aubervilliers, Paris
APAC	Shanghai	China	China UnionPay C/O Shanghai Data Solution Co. Ltd. No. 4567, Long Dong Avenue, Pudong District, Shanghai
APAC	Shanghai II	China	No.2860 Jinke Road, Pudong New Area,

Market	City	Country	Address
			Shanghai 201203
APAC	Shanghai III	China	International Data Exchange Centre Shanghai Data Solution Co.,Ltd Building 4, No.400, Fang Chun Road, Pudong District, Shanghai
APAC	Singapore	Singapore	750 Estuary Chai Chee Road #06-01, Technopark@chai chee, Singapore 469005
APAC	Sydney	Australia	400 Harris Street Ultimo NSW 2007, Australia
APAC	Tokyo	Japan	Telecom Center, West Tower 19th Floor, Tokyo
APAC	Tokyo III	Japan	Asahi Computer Building 2-3-10 Fukuzumi, Koto-ku Tokyo, 135-0032
CALA	Toronto	Canada	73 Laird Drive Toronto, Ontario M4G 3T4

10.3. Service Method of Procedure (SMOP)

10.3.1. Introduction

The Service Method of Procedure (SMOP) provides a way to thoroughly plan activity on the Network. The SMOP/Network Event Mechanization (SNEM) system allows you to build specific SMOPs on-line. Network Events constitute an integral part of SNEM because they allow for scheduling and managing risk when work is performed on the Network. Please refer to Section 2 and 4 of the Ask Yourself Handbook (at Ask Yourself) for more complete information on SMOPs and SNEM.

10.3.2. CLLIs

The first step in creating a Detailed SMOP involves identifying the Common Language Identification Locations (CLLI's) that will be affected by the proposed work. The CLLI's that are applicable to Web Hosting are:

Internet Data Center	Geo City	CLLI
Allen, TX	Dallas, TX	ALLNTXGM

Internet Data Center	Geo City	CLLI
Ashburn, VA	Washington, DC	ASBNVACU
Dallas, TX	Dallas, TX	DLLTTX01
Hawthorne, CA	Los Angeles, CA	HWTHCANE
Irvine, CA	Irvine, CA	IRVNCAOW
Lisle, IL	Chicago, IL	LSLEILAA
Lithia Springs, GA	Atlanta, GA	LTSPGA02
Lynnwood, WA	Seattle, WA	LYWDWAJG
Mesa, AZ	Mesa, AZ	MESAAZLB
NYC, 811 10th Ave., NY	New York , NY	NYCMNY54
Oakbrook, IL	Oakbrook, IL	OKBRILOAENS
Orlando, FL	Orlando, FL	ORLDFLMM
Piscataway, NJ	Piscataway, NJ	PSWYNJ63
Redwood City, CA	Redwood City, CA	RDCYCA02
San Diego (Koll), CA	San Diego, CA	SNDKCACN
San Jose, CA	San Jose, CA	SNJLCAZE
Secaucus, NJ	Secaucus, NJ	SCCSNJEM
Watertown, MA	Boston, MA	WTTWMABD

Web Hosting SMOP Process Flow

Architecture
Planning

Network
Maintenance

Provisioning

Access
SMOP
application:
Prepare
SMOP with
SNEM/AOTS
Ticket

Perform
Conflict ID,
risk
assessment
and reserve
time

Submit
SMOP for
Review by
other
Experts

SMOP
Review by
other
Experts

Concurred?

No

Rejected?

yes

yes

No

No

Approve
SMOP, NE
assigned,
time locked,
auto e-mail
to
technician

Correct
SMOP, and
refer back
to the
originator

Complete
work and
close
SMOP

Correct
SMOP, and
refer back
to the
originator

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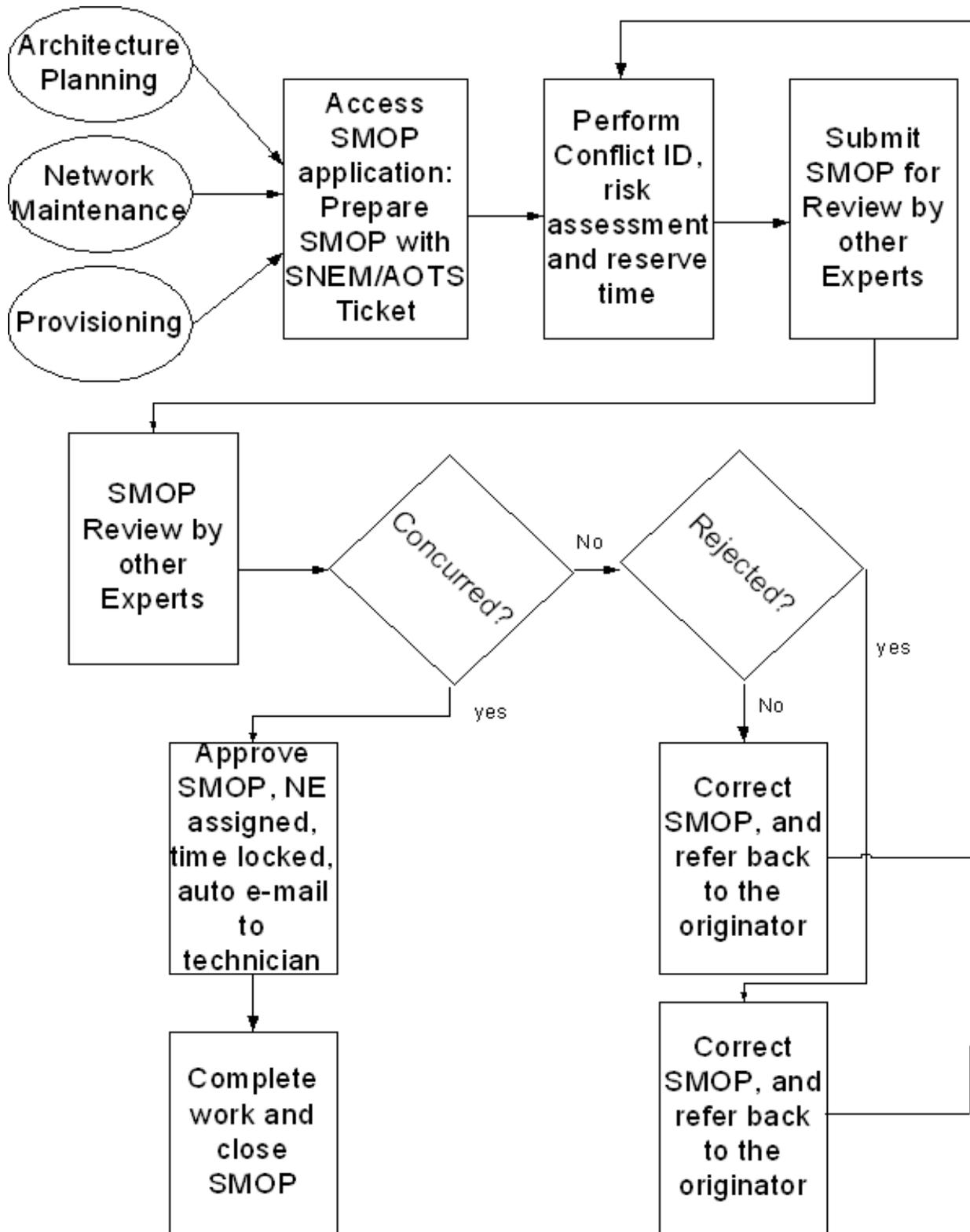
10.3.3. SMEs & the SMOP Approval Process

The following general guidelines related to SMOP approval for Web Hosting are followed:

- GNO SMEs have 72 hours to approve the technical content of the SMOP.

- If possible SMOPS should help the GCSC provide proper notification for our customers 2 weeks (Data Center) 1 week (Backbone)

- If your SMOP has not been approved in a timely manner contact the SME and ask that they review / approve the SMOP

- If the primary SME is unavailable contact the secondary SME and ask that they review / approve the SMOP

- If no SMEs are available contact the General Manager of the respective Web Hosting Data Center.

- If a SME or General Manager gives verbal confirmation to approve the SMOP, any other SME can approve for that Technology

- Work can not be conducted if SMOP is not fully approved, and/or if notification has not gone out

Technology	SME	Email	Phone
AENS (Power)	Stephen Adolph	sadolph@att.com	**(770) 819-3850**
	James Sommers	jsommers@att.com	**(212) 903-6117**
	Chuck Krieger	Ck8527@att.com	**(972) 620-5305**
	Leland Horstmann	lh4636@att.com	**(908) 391-6707**
	Timothy Goff	tsgoff@att.com	**(630) 810-6867**
AENS (San Diego Koll)	**Primary** Tammy Knowlton	ts7158@att.com	**(858) 221-1931**
	Secondary Greg Woods	woodsr@att.com	**(858) 320-5505**
AENS (Allen)	**Primary** Kathleen Schauf	kschauf@att.com	**(214) 547-3232**
	Secondary Richard Burchfield	raburchfield@att.com	**(214) 547-3248**
AENS (Ashburn)	**Primary** Lorraine Lee	lorrainelee@att.com	**(703) 726-3106**
	Secondary Anja Hodge	anjahodge@att.com	**(703) 726-3104**
AENS (Dallas)	**Primary** Mark Taylor	Mt3595@att.com	**(972) 620-5304**

Technology	SME	Email	Phone
	Secondary Chuck Krieger	Ck8527@att.com	**(972) 620-5305**
AENS (Hawthorne)	**Primary** Chris Sheets	cnsheets@att.com	**(323) 781-1203**
	Secondary Chuck Krieger	Ck8527@att.com	**(972) 620-5305**
AENS (Irvine)	**Primary** Tammy Knowlton	ts7158@att.com	**(949) 221-1931**
	Secondary Ray Ciok	rc4918@att.com	**(949) 221-1928**
AENS (Lisle)	**Primary** Pamela Rockey	prockey@att.com	**(630) 810-6218**
	Secondary Patrick Durkin	pdurkin@att.com	**(630) 810-6436**
AENS (Lithia Springs)	**Primary** Nancy Mashburn	nancy.mashburn@att.com	**(770) 819-3860**
	Secondary Stephen Adolph	sadolph@att.com	**(770) 819-3850**
AENS (Lynnwood)	**Primary** Khalid Khan	knkhan@att.com	**(425) 835-7752**
	Secondary Timothy Goff	tsgoff@att.com	**(630) 810-6867**
AENS (Mesa)	**Primary** Mike Alexander	malexander1@att.com	**(480) 844-5827**
	Secondary Ray Thom	raythom@att.com	**(480) 827-6193**
AENS (NYC - 811)	**Primary** Lynn Quinn	lcquinn@att.com	**(212) 902-6116**
	Secondary Dave Rechen	drechen@att.com	**(212) 903-6118**
AENS (Oakbrook)	**Primary**: Pam Rockey	prockey@att.com	**(630) 810-6218**
	Secondary Patrick Durkin	pdurkin@att.com	**(630) 810-6436**
AENS (Orlando)	**Primary** Kevin Roy	kroy@att.com	**(407) 858-5210**
	Secondary Steven Adolph	sadolph@att.com	**(770) 819-3850**
AENS (Piscataway)	**Primary** Bill Lee	wl2317@att.com	**(732) 733-9037**
	Secondary Gary O'Leary	go822v@att.com	**(732) 733-9038**
AENS (Redwood City)	**Primary** Joanne Kelley	joannekelley@att.com	**(650) 780-1302**
	Secondary Timothy Goff	tsgoff@att.com	**(630) 810-6867**
AENS (San Jose)	**Primary** Jill Hansen-Miller	hansenmiller@att.com	**(408) 493-8800**
	Secondary Timothy Goff	tsgoff@att.com	**(630) 810-6867**
AENS (Secaucus)	**Primary** Lynn Quinn	lcquinn@att.com	**(201) 903-6116**
	Secondary Erin Lush	elush@att.com	**(201) 330-5176**

Technology	SME	Email	Phone
AENS (Watertown)	**Primary** Tony Chabot	tonychabot@att.com	**(617) 972-7106**
	Secondary James Sommers	jsommers@att.com	**(212) 903-6117**
	Secondary Anthony Bradley	ambradley@att.com	**(617) 972-7121**
AENS (MoW)	**Primary:** James Sommers	jsommers@ems.att.com	**(212) 903-6117**
AENS (MoW)	**Secondary:** Andrew Walton	aw2871@att.com	**+44 1527 492218**

10.4. Work Schedule Guidelines

10.4.1. Introduction

The decision of when to perform a service should be based on the impact that a process failure can have on AENS customers, not on how well we believe we can execute the change or the probability of process success. In addition, the impact of an unsuccessful execution of a planned activity on the Network, regardless of whether it is a routine operation, should weigh into the decision.

Work Schedule Guidelines specify the time windows in which work activities can be performed. Work activities have varying degrees of risk. By identifying these activities and their criticality, work can generally be spread around the clock. Breaking down work activities and scheduling them according to their risk levels eliminates most bottlenecks.

10.4.2. Primary Work Schedule Guidelines

- All work that involves changes in service affecting databases, network element software, and hardware configurations will be done during the 12:01am to 6:00am local time period. More critical activities are further restricted based on the technology involved. Infrastructure work will follow the matrices in Section 10.5.When preparing the SMOP associated with planned work, the involved parties should concur regarding the hours of work indicated for particular steps in the process.

- No two related network elements should perform High Risk work at the same time

- Concurrent work activity on more than one critical network element in a local geographic area will not be permitted

- When performing work on two similar elements on the same night, in different markets/geographic areas in the country, the critical activity that might put the element at risk (e.g., boot) will be performed at different scheduled times.

- Risk should be assessed based on the impact that a process failure can have on AT&T customers, not on how well we believe we can execute the change or the probability of process success.

- The impact a planned activity would have on the Network if not completed successfully must be determined in advance.

10.4.3. Work Activities Covered

Certain activities may be performed during all hours of the day under the direction of the appropriate support organization. The following are a few examples that may be worked during the day if the integrity of the network is at risk:

- Repair of equipment that has interrupted service

- Repair of equipment that is in a service degrading condition.

- Repair of equipment that is essential to our ability to provide service

Routines may be performed during normal business hours when no service jeopardies exist (e.g., visual inspections, battery readings).

Installation of new equipment will be allowed during normal business hours as long as there is no contact or integration with working/existing equipment or infrastructure systems that could potentially impact the Network. If unsure, contact the appropriate technology SME for assistance in determining when to perform work.

New equipment installation will be allowed during the normal business day as long as there is no contact with working/ existing equipment. Acceptable normal business day activity includes placing of cable that does not cross Power or any Processor-Controlled Equipment, databasing of the equipment, testing of that database, and installation of out-of-service equipment.

10.4.4. Power

A complete list of Network Operation Power Planned Activities and their associated Risk Factors and Time Restrictions can be found in Section 10.5.4 under Network Event Matrix - Power Activities.

Each Web Hosting Data Center must have a method of procedure to follow in the event of utility AC power failure. An appropriate time to return to commercial power should be considered before making the transfer.

Before transferring back to commercial power, wait an appropriate interval to insure the commercial power is stable and not likely to fail again. The Building Infrastructure systems, in support of Safety and Network Reliability, must be given a priority. A physical walk-through of central office power plants is required and essential after every transfer of electrical power.

10.4.5. Infrastructure

A complete list of Building Infrastructure Planned Activities and their associated Risk Factors and Time Restrictions can be found in Section 10.5.5 under Network Event Matrix - Building Infrastructure Activities.

The general guidelines are applicable to the following infrastructure elements:

- Building Mechanical Systems/HVAC

- Building Electrical Systems

- AC Emergency Power Systems

- Building Structure

- Environmental

- Building Security/Systems

- Building Fire Detection/Alarm Systems

- General Building Construction

General Infrastructure Guidelines

- Infrastructure equipment in direct or indirect support of operating network equipment, switching, and/or transport will be given the same urgency consideration as power. Any planned maintenance, construction, and/or removal activity that may negatively affect the Network must be performed in accordance with specified maintenance windows in the Infrastructure Matrix.

- When performing any work activity on building equipment, consideration must be given to that equipment and its interrelationship with other components within that system and other systems.

- Understand system configuration and operation, with relationship to safety and service provided. Drawings, specifications, and manuals are critical and must be available and referenced, as necessary, prior to the start of any work activity. A physical inspection of the systems and work area must be made to confirm the accuracy of the documentation on-hand.

- Prior to the start of any work activity, an accurate assessment of all required tools and supplies must be made to ensure that the activity will be satisfactorily completed.

- After internal resources have been identified, an assessment of other available resources should be made to determine the potential need and availability of supplemental resources. Consideration should be given to resources for support of a back-out plan.

• Some building work activities may have environmental implications. Therefore, an understanding of all levels of environmental requirements is essential.

• Other building work activities, such as construction, could affect the Network. An assessment and mitigation of the potential risks must be made prior to any such activity.

• Building Engineering personnel will provide support for the appropriate scheduling of all building infrastructure activities.

10.5. Network Event Guidelines

10.5.1. Introduction

A Network Event is defined as any planned work that has the potential to interrupt or degrade Customer service.

The Web Hosting Network Events Guidelines, Rules and Procedures provided in this section complement the appropriate times for performing a variety of work activities reflected in the Network Event Matrices. They also provide direction for the process of reporting and approving work activity that affects customer service.

10.5.1.1. Definition of Demand Maintenance Repairs:

Demand Maintenance Repairs constitutes a life, health, safety or likely damage to a facilities core infrastructure that could cause significant damage to the building, building systems or have a direct impact on customer uptime. These situations require immediate action; no customer notification is to be expected. If neglected, this condition could create an unmanageable or unsafe condition throughout the environment.

Definition of Routine / Planned Maintenance:

Routine or Planned maintenance activities that are non-urgent, maintenance tasks or programs which need to be carried out as a result of normal usage or any repair that would improve system reliability, increasing facility uptime or maintain the comfort and convenience of the environment. These would include all WMS scheduled routines performed by the onsite work force or third contracted party vendors. Customer notification would be recommended for task with a "Risk Factor" of 5 found in the Ask Your Self handbook chapter 10 and the "NT668" section of the SMOP.

10.5.2. Network Events/Change Management Process

Please reference Section 4 of the Ask Yourself Handbook at Ask Yourself for in-depth information on the main components of the Network Events/Change Management Process. These include:

- Abnormal / Hazardous Condition Reporting

- Process and Route SMOP/NE Request from SME

- Review/Concur SMOP

- Perform Conflict Resolution

- Obtain Network Event Number

- Waivers to Network Events Approval Guidelines

10.5.3. Web Hosting Redundancy (N+1) Guidelines

The definition for a Redundancy (N+1) leg in the Web Hosting environment is "a system (i.e., PDU, USS, Battery, UPS, ODP or Chiller, pump, cooling tower) of which any of the components or combination of components are not functioning, thus preventing support to the data floor".

The general Redundancy (N+1) guidelines for Network Events at Internet Data Centers are as follows:

- With the redundant features in most Internet Data Centers, work or maintenance performed on the redundant legs of a system should be performed following the Power and Building Infrastructure Network Event Matrices

- If one leg of redundancy is down, no work or maintenance should be performed on the opposite system carrying the service or feed until full redundancy is restored.

- If one leg of redundancy is down and the second leg is in jeopardy, immediate notification to the Power Mod in the Conyers COE and Alpheretta GCSC and the TCB process should be activated.

- Whichever leg can be repaired or restored in the shortest timeframe should be repaired first to ensure stability of service.

- Efforts should then be made to restore full redundancy once service continuity is assured.

10.5.4. Network Events Matrix - Power Activities

The work activities listed below for Power represent the Network Event Criteria and Planned Activities followed at Web Hosting Data Centers. It is recognized that the matrix information assists in determining whether a work activity qualifies as a Network Event and that the Network Event Matrix for Power Activities below should only serve as a guideline.

Any SMOPs normally requiring the task to be done within a maintenance window (ie 2200-0600 or 1800-0600) to be done outside these windows will require submitting an exception via the GNOC exception process (http://gnoc.web.att.com/ default.htm). Prior to submitting the Exception Request to the GNOC, 3 Web Hosting Power SMEs must review the

SMOP and the Exception Request and approve it. The manager on Duty at the GCSC will be informed of this review and decision to complete the work outside the normal window and can confirm customer notification.

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restriction	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
P00	Transfer of any customer loads from primary source to secondary source or isolating equipment.	3		Yes	Yes			X
P01	Engine Run with no load transfer	0	Yes	No	No			
P02	Engine Run with load transfer (closed transition)	3		Yes	Yes			X
P03	Engine Run for "blackhole" test (disconnect utility - open transition)	5		Yes	Yes			X
P04	Installing or removing new circuits in new RPPs with no existing service	1	Yes	No	No			
P05	Terminations of circuits with existing services	3		Yes	Yes			X
P06	Terminating or removing new circuits in PDUs with no existing service	1	Yes	No	No			
P07	Terminating or removing new circuits in PDUs WITH existing service	4		Yes	Yes			X
P08	Maintenance or repair on a PDU with the ability to transfer and protect load Transfer of any customer loads from primary source to secondary source or isolating equipment. Place unit in bypass as per P00	4		Yes	Yes		X	

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ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restriction	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
P09	Maintenance or repair to a PDU taking it out of service - Customer notification required	5		Yes	Yes			X
P10	Maintenance or repair on UPS systems WITH (N+1) Redundancy Transfer of any customer loads from primary source to secondary source or isolating equipment. Refer to P00	2		No	No			
P11	Maintenance or repair on UPS systems without redundancy	5		Yes	Yes			X
P12	Maintenance or repair on a single UPS module with inter module redundancy going to bypass	4		Yes	Yes			X
P13	Maintenance or repair on Main Services Switch Board WITH (N+1) Redundancy Transfer of any customer loads from primary source to secondary source or isolating equipment. Refer to P00)	2		No	No			
P14	Maintenance or repair on Main Services Switch Board without redundancy	5		Yes	Yes			X
P15	Maintenance or repair on Distribution Boards WITH (N+1) Redundancy Transfer of any customer loads from primary source to secondary source or isolating equipment.	2		No	No			

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	Refer to P00							
P16	Maintenance or repair on Dis-tribution Boards without re-dundancy	5		Yes	Yes			X
P17	Maintenance or repair on ATS WITH (N+1)Redundancy	2		No	No			
	Transfer of any customer loads from primary source to secon-dary source or isolating equip-ment.							
	Refer to P00							
P18	Maintenance or repair on ATS without redundancy	5		Yes	Yes			X
P19	Maintenance or repair to en-gines WITH (N+1) Redundan-cy	1	Yes	No	No			
P20	Maintenance or repair to en-gines without redundancy	5		Yes	Yes			X
P21	Maintenance or repair on bat-tery plants WITH (N+1) Re-dundancy	2		No	No			
P22	Maintenance or repair on bat-tery plants without redundancy	5		Yes	Yes			X
P23	Reading Battery Specific Gravity	2	Yes	No	No			
P24	Reading Battery Cell Voltage	2	Yes	No	No			
P25	Reading Battery String Volt-age	2	Yes	No	No			
P26	Adding Water to Battery Cells (control power, UPS, engines)	2	Yes	No	No			
P27	Battery intercell connector re-moval (one connector set at a time for cleaning) but not cell	1		No	No			

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restriction	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	replacement WITH (N+1) redundancy on battery string							
P28	Battery intercell connector removal (one connector set at a time for cleaning) but not cell replacement without redundancy on battery string	3		Yes	Yes		X	
P29	Battery Cell Replacement Transfer of any customer loads from primary source to secondary source or isolating equipment. Refer to P00	3		No	No			
P30	AC circuit breaker testing that removes (N+1) redundancy from essential panels or equipment Transfer of any customer loads from primary source to secondary source or isolating equipment. Refer to P00	5		Yes	Yes		X	
P31	AC circuit breaker testing that does not remove (N+1) redundancy from essential panels or equipment	1	Yes	No	No			
P32	Standby Engine circuit breaker testing with (N+1) redundancy	1	Yes	No	No			
P33	Standby Engine circuit breaker testing without redundancy	5		Yes	Yes			X
P34	AC circuit breaker activity that will shut down redundant essential HVAC equipment	1	Yes	No	No			

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
P35	AC circuit breaker activity that will shut down Non-redundant essential HVAC equipment	3		Yes	Yes	X	X	
P36	AC bus duct testing, cleaning and torquing	5		Yes	Yes			X
P37	AC bus bar or cable testing, maintenance or torquing that maintains (N+1) redundancy on essential HVAC equipment	1	Yes	No	No			
P38	AC bus bar or cable testing, maintenance or torquing that removes redundancy on essential HVAC equipment	5						
P39A	<= 15 minutes	3	Yes	No	No			
P39B	>15 minutes	5		Yes	Yes			X
P40	Terminating, removing or tapping energized AC conductors	4		Yes	Yes			X
P41	Terminating or removing AC conductors from accessible de-energized circuit breakers in cabinets where energized surfaces or components have been insulated and/or protected	3		Yes	Yes			X
P42	Pulling new conductors into power cabinets (i.e., switch gear, MCCs, unit sub-stations) where energized surfaces or components have been insulated and/or protected	4		Yes	Yes			X
P43	Planned service entrance transformer maintenance or replacement (loss of commercial power)	5		Yes	Yes			X
P44	Installing or placing temporary protection (barriers and/or in-	2	Yes	No	No			

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	sulation) over or near AC and DC equipment							
P45	Opening hinged equipment doors or removing hinged cab-inet doors (Under 600 volts) No internal covers to remove This includes load readings	1	Yes	No	No			
P46	Opening unhinged equipment doors or removing unhinged cabinet doors feeding critical load, (600 volts or less) With internal covers to be re-moved. This includes load readings	4		Yes	Yes		X	
P47	Opening unhinged equipment doors or removing unhinged cabinet doors feeding (Non-Critical Load)	1	Yes	No	No			
P48	AC and DC equipment visual inspections non intrusive	1	Yes	No	No			
P49	AC and DC voltage and am-perage/load readings using clamp on ammeter (600 volts or less) Refer to P45-P47							
P50A	- Without cutting or removing cable ties or stitching	2	Yes	No	No			
P50B	- Cutting or removing cable ties or stitching	3		Yes	Yes			X
P51	AC and DC voltage and am-perage readings using clamp on ammeter (over 600 volts)	2		No	No			
P52	Indicator lamp replacement	0	Yes	No	No			

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
P53	Heat scanning, Infrared scanning or Thermography - Non-Intrusive	0	Yes	No	No			
P54	Heat scanning, Infrared scanning or Thermography - Intrusive Refer to P54-56	2		No	No			
P55	Emergency Power Off (EPO) - electrical maintenance / repair	5		Yes	Yes			X
P56	Turn on or off UPS (includes Modules) or PDU	3	Yes	No	No			
	Without customer load							
P57	Commissioning and energizing new PDUs,	4		Yes	Yes			X
	UPS's for the first time or Switchgear installation, energizing and connection to the existing systems							
P58	Install Amp Meter on RPP							
	- Deenergized RPP	0			No			
	- Install amp meter on existing RPP/energized	4		X	Yes			X

Note 1: If the activity effects more than one client and specifically ones that have not called for demand maintenance, notification is required. If the activity affects only one client AND is demand for that client, the client is considered notified and no further notification is required

10.5.5. Network Events Matrix - AENS Building Infrastructure

The work activities listed below for AENS Building Infrastructure represent the Network Event Criteria followed at the AENS Web Hosting Data Centers. It is recognized that the matrix information assists in determining whether a work activity

qualifies as a Network Event and that the Network Event Matrix for Building Infrastructure Activities below should only serve as a guideline.

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	Chiller and Water Systems							
B01	Maintenance or repair to chillers WITH (N+1) redundancy (Redundancy must be maintained during planned repair or maintenance, if redundancy is removed as a result of this activity see B02)	1	Yes	No	No			
B02	Maintenance or repair to chillers without redundancy	5		Yes	Yes		X	
B03	Chiller walk through and inspections	0	Yes	No	No			
B04	Chiller water or condenser water pumps (quarterly maintenance) WITH (N+1) Redundancy	0	Yes	No	No			
B05	Chiller water or condenser water pumps (quarterly maintenance) without redundancy	5		Yes	Yes		X	
B06	Chiller eddy current test WITH (N+1) Redundancy	0	Yes	No	No			
B07	Chiller eddy current test without redundancy	5		Yes	Yes		X	
B08	Chilled or condenser water piping hot or cold tap WITH (N+1) Redundancy	1		Yes	No			
B09	Chilled or condenser water piping hot or cold tap without redundancy	5		Yes	Yes			X
	Air Handling or Fan Systems							

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
B10	Maintenance or repair to AHU WITH Redundant unit carry-ing load (N+1)	1	Yes	No	No			
B11	Maintenance or repair to AHU without Redundant unit carry-ing load	5		Yes	Yes	X	X	
B12	CRAC Maintenance or repair to a single unit	1	Yes	No	No			
B13	CRAC Maintenance or repair involving shut down of multi-ple units greater than 10% of total units	5		Yes	Yes		X	
B14	Exhaust fan maintenance	1	Yes	No	No			
B15	Variable Air Volume (VAV) maintenance in non-critical areas	0	Yes	No	No			
B16	Variable Air Volume (VAV) maintenance in CRITICAL areas	3		Yes	Yes		X	
B17	Maintenance to Smoke purge systems	1	Yes	No	No			
B18	Fire damper maintenance	1	Yes	No	No			
	Environmental Control							
B19	Pneumatic-Electrical control system maintenance	4		No	No			
B20	Air compressor maintenance WITH (N+1) Redundancy	1	Yes	No	No			
B21	Air compressor maintenance without Redundancy	4		Yes	Yes		X	
B22	Emergency Power Off (EPO) - mechanical maintenance / re-pair	5		Yes	Yes			X

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	Cooling Towers							
B23	Maintenance to Cooling Towers WITH (N+1) Redundancy	1	Yes	No	No			
B24	Maintenance to Cooling Towers without Redundancy	5		Yes	Yes		X	
B25	Water Treatment	0	Yes	No	No			
	Humidifier Systems							
B26	Humidifier maintenance	1	Yes	No	No			
B27	Humidifier maintenance on the Data Center Floor or tying into or working on systems supporting the data center floor	4		Yes	Yes	X	X	
	Early warning fire detection and suppression systems							
B28	Fire drills	1	Yes	No	No			
B29	Fire alarm system monthly maintenance	1	Yes	No	No			
B30	Fire alarm system monthly maintenance on the Data Center Floor or tying into or working on systems supporting the data center floor	1	Yes	No	No			
B31	Fire alarm system annual maintenance	1	Yes	No	No			
B32	Maintenance / testing of Sprinkler, Halon and CO2 Suppression Systems on the Data Center Floor or tying into or working on systems supporting the data center floor	5		Yes	Yes		X	
	Building Support Equipment							

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restriction	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
B33	Lights- replacing bulbs or tubes over critical equipment	1	Yes	No	No			
B34	Lights - replacing ballast or repair over critical equipment	1	Yes	No	No			
	Heating Systems							
B35	Water heaters	0	Yes	No	No			
B36	Electric strip heaters	0	Yes	No	No			
B37	In-duct heaters	0	Yes	No	No			
B38	In-duct heaters on the Data Center Floor or tying into or working on systems supporting the data center floor	1		Yes	No			
	Construction / Installation and Removal							
B39	Construction/demolition of walls and partitions	1	Yes	No	No			
B40	Construction/demolition of walls and partitions on the Data Center Floor or tying into or working on systems supporting the data center floor	3		Yes	No			
B41	Air handling systems	1	Yes	No	No			
B42	Sprinklers/Fire Suppression systems	1	Yes	No	No			
B43	Sprinklers/Fire Suppression systems on the Data Center Floor or tying into or working on systems supporting the data center floor	5	Yes	Yes	Yes		X	
B44	Chiller Systems	1		Yes	No			
B45	Chiller Systems on the Data Center Floor or tying into or	5		Yes	Yes		X	

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restriction	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	working on systems supporting the data center floor							
B46	Ductwork	1	Yes	No	No			
B47	Ductwork on the Data Center Floor or tying into or working on systems supporting the data center floor	3		Yes	Yes		X	
B48	Cooling towers	1	Yes	No	No			
B49	Cooling towers if no alternate Cooling System available	3		Yes	Yes	X	X	
B50	HVAC control systems	1	Yes	No	No			
B51	HVAC control systems on the Data Center Floor or tying into or working on systems supporting the data center floor	4		Yes	Yes		X	
B52	EWFD (Early Warning Fire Detection) systems	1	Yes	No	No			
B53	EWFD systems on the Data Center Floor or tying into or working on systems supporting the data center floor	3		Yes	Yes	X	X	
B54	Roof repair - replacement	1	Yes	No	No			
B55	Roof repair - replacement on the Data Center Floor or tying into or working on systems supporting the data center floor	4		Yes	Yes	X	X	
B56	Pipe cutting and welding (Permit required)	1	Yes	No	No			
B57	Pipe cutting and welding on the Data Center Floor or tying into or working on systems supporting the data center floor	4		Yes	Yes	X	X	

ID	Planned Activity POWER	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
	(Permit required)							
B58	Chilled or condenser water piping hot or cold tap	1	Yes	No	No			
B59	Chilled or condenser water piping hot or cold tap on the Data Center Floor or tying into or working on systems supporting the data center floor	5		Yes	Yes		X	
B60	Conduit/Wiring	1	Yes	No	No			
B61	Conduit/Wiring on the Data Center Floor or tying into or working on systems supporting the data center floor	2		Yes	No			
B62	Heating Systems	1	Yes	No	No			
B63	Heating Systems on the Data Center Floor or tying into or working on systems supporting the data center floor	3		Yes	No			
B64	Carpet, tile or raised floor systems	0	Yes	No	No			
B65	Carpet, tile or raised floor systems on the Data Center Floor or tying into or working on systems supporting the data center floor	1	Yes	No	No			

Note 1: If the activity effects more than one client and specifically ones that have not called for demand maintenance, notification is required. If the activity affects only one client AND is demand for that client, the client is considered notified and no further notification is required

10.5.6. Network Events Matrix - General Installation Guidelines

- When performing any installation activity consideration must be given to existing cages, customer equipment and power infrastructure that are in proximity to the ongoing work on the floor as well as below the floor. Risk assessment must also be considered when working over live equipment in non raised floor areas. A determination must be made via a walkthrough as to the risk of the planned installation activity to the surrounding existing live equipment.

- Prior to the start of any work activity agreement must be made between the IDC Operations personnel and construction personnel as to the work to be performed that does not require an SMOP per the matrix guidelines. A current MOP should be on hand outlining the general guidelines for any activity

- Some installation activities may have environmental implications. Therefore, an understanding of all levels of environmental impact is essential while performing installation activities. Examples of such activities: removal of too many floor tiles which would affect air flow and could also affect Vesda air flow which could cause alarms.

    ° The center Operations Manager and/or Project Manager will direct all installation scheduling based on customer requirements and using the installation matrix to determine risk levels and the windows when work can be performed.

    ° All hot power work activities needed to complete installations are covered in section 10.5.4 Network Events Matrix Power Activities specifically items P04 through P07 and P58.

    ° Definitions- Obstructed path versus unobstructed path. An unobstructed path whether on under floor ladder rack, overhead or on the floor itself is a path that has no customer active receptacles or plug strip wires within a foot of the projected path of new low voltage cabling or power cabling. An unobstructed path would also include ladder rack with existing bundled and tied low voltage cable. An obstructed path would be defined as a path in which new cable or power whips would have to run in less than a foot from active customer power receptacles or through existing cages perpendicular to the rack or cabinet line. A parallel run is acceptable providing the one foot distance from active power receptacles is maintained.

Below is the Installation Guidelines Matrix:

	Planned Activity	Risk Factor	Local Mop	Network Event SMOP Required	Time Restriction	Anytime Weekends	6PM to 6AM Any Day	10PM to 6AM Any Day
C01	**Install RPP**							
	New install open area	1	X		No			
	New install within 5' feet of existing RPPs	2	X		No			
	Install RPP inside active customer cage within 5' of active equipment	4		X	Yes			X

	Planned Activity	Risk Factor	Local Mop	Network Event SMOP Required	Time Restric-tion	Anytime Weekends	6PM to 6AM Any Day	10PM to 6AM Any Day
	Install RPP inside active customer cage in excess of 5" feet of active equipment	2	X		No			
C02	**Remove RPP**							
	In open area	1	X		No			
	Remove within 5' feet of existing RPPs	2	X		No			
	Remove RPP inside active custom-er cage within 5' of active equip-ment	4		X	Yes			X
C03	**Run Whip/Feeder from PDU to RPP/No live connections made**							
	In open area	1	X		No			
	Under existing vacant customer cage	1	X		No			
	Under existing active customer cage with obstructed path	3		X	Yes		X	
	Over head feeds/no raised floor	2	X		No			
C04	**Run Whip/Feeder from RPP to Receptacle/No liveconnections made**							
	In open area	1	X		No			
	Under existing active customer cage with obstructed path	3		X	Yes		X	
	Over head feeds/no raised floor	2	X		No			
C05	**Remove Whips no longer in use**							

	Planned Activity	Risk Factor	Local Mop	Network Event SMOP Required	Time Restric-tion	Anytime Weekends	6PM to 6AM Any Day	10PM to 6AM Any Day
	In open area	1	X		No			
	Under existing customer cage with obstructed path	3		X	Yes		X	
	Over head feeds/no raised floor	2	X		No			
C06	**Install Junction Box**							
	In open area	1	X		No			
	Under existing active customer cage	3		X	Yes		X	
C07	Remove Junction Box							
	In open area	1	X		No			
	Under existing active customer cage	3		X	Yes		X	
C08	**Install Receptacles**							
	In new cage	1	X		No			
	In existing active customer cage/ cabinet	2	X		No			
	Overhead/Non raised floor	2	X		No			
C09	**Remove or Change Receptacles/ Curcuit verified and deenergized**							
	In new cage	1	X		No			
	In existing active customer cage/ cabinet	2	X		No			
	Overhead/Non raised floor	2	X		No			

	Planned Activity	**Risk Factor**	**Local Mop**	**Network Event SMOP Required**	**Time Restric-tion**	**Anytime Weekends**	**6PM to 6AM Any Day**	**10PM to 6AM Any Day**
C10	**Relocate Receptacle**							
	In new cage	1	X		No			
	Existing active customer cage/un-obstructed path	2	X		No			
	Existing active customer cage/ob-structed path	4		X	Yes		X	
	Overhead/Non raised floor	2	X		No			
C11	**Test Power at Receptacle**							
	In new cage	1	X		No			
	In existing customer cage	2	X		No			
C12	**Install Power Strips**							
	In new cage	1	X		No			
	In existing customer cage	2	X		No			
C13	**Remove Power Strips**							
	In new cage	1	X		No			
	In existing customer cage	2	X		No			
C14	**Install Rack or Cabinet**							
	In new cage	1	X		No			
	In existing customer cage	2	X		No			
C15	**Remove Rack or Cabinet**							
	In new cage	1	X		No			

	Planned Activity	Risk Factor	Local Mop	Network Event SMOP Required	Time Restric-tion	Anytime Weekends	6PM to 6AM Any Day	10PM to 6AM Any Day
	In existing customer cage	2	X		No			
C16	**Ground Rack or Cabinet**							
	In new cage	1	X		No			
	In existing customer cage	2	X		No			
C17	**Construct Cage**							
	In new area	1	X		No			
	In obstructed area	2	X		No			
C18	**Ground Cage**							
	In new area	1	X		No			
	In obstructed area	2	X		No			
C19	**Remove Cage**							
	In new area	1	X		No			
	In obstructed area	2	X		No			
C20	**Cut Floor Tiles**							
	Cut or drilled outside of raised floor	0			No			
	Cut or drilled in place on raised floor	2	X		No			
C21	**Install Additional Floor Support**							
	In new area	1	X		No			
	In obstructed area/cage	2	X		No			

	Planned Activity	Risk Factor	Local Mop	Network Event SMOP Required	Time Restric-tion	Anytime Weekends	6PM to 6AM Any Day	10PM to 6AM Any Day
C22	**Labeling all devices**							
	In new area	1	X		No			
	In active customer cage	2	X		No			
	LOW VOLTAGE CABLING							
LV01	**Install Cabling**							
	MDF to MDF/no service	1	X		No			
	MDF to MDF/with live service	3	X		No			
LV02	IDF to MDF/no service	1	X		No			
	IDF to MDF/with live service	3	X		No			
LV03	Cross connects/installation	2	X		No			
	Cross connects/removal - See Disconnect Process Section 10.5.6.1							
LV04	Patch panels/new install	1	X		No			
	Patch panels/remove	1	X		No			
LV05	Run cable in open area	1	X		No			
	Run cable in occupied area with unobstructed path	2	X		No			
	Run cable in occupied area with obstructed path	3	X		Yes		X	
	Run cable overhead/open path	1	X		No			
	Run cable overhead/ obstructed path	3	X		No			

10.5.6.1. Disconnect Process

CQC must issue a statement to all customers notifying them that when they issue a disconnect to their access provider, they must also send an e-mail to the CQC at CQC@attens.com with their circuit id and expected disconnect date.

Process to be followed by IDC when doing backend circuit disconnects:

1.   IDC receives ticket from the CQC with disconnect information.

     If Uplink CQC must provide IDC switch name and port info.

     If T1, E1, DS3, CQC must Provide IDC with Circuit ID's and DMARC Location.

2.   IDC compares circuit information from the ticket with IDC local database

3.   If the circuit information does not match, update the ticket with what the IDC has listed in their database and send the ticket back to CQC for clarification with the customer.

4.   If the information does match follow disconnect process:

Disconnect process:

1.   IDC will take the circuit layout information from local database.

2.   Track all wiring and match labeling to be sure all points are accurate (if not stop, resolve and resume)

3.   Start the disconnect by removing the cable at the customer equipment side (the customer standalone cabinet or cage location). Customer must provide location name of device.

4.   Take the removed cable (the cable from customer standalone cabinet or cage location) and connect it to the appropriate test set and verify if a signal is present. If there is a signal, reinsert cable into customer equipment immediately, the IDC must then update the ticket with results found and ask the CQC to verify that it is a valid disconnect.

5.   Once the ticket comes back to the IDC to proceed, the IDC will now retrace circuit again, verify all results remain the same compared to the initial trace. If the results differ (stop resolve resume until results match). It is good practice to unplug circuit and leave for 24-48 hours to ensure that there are no issues.

When possible disconnects should be done on the off tours with two technicians.

Once the circuit disconnect is complete update your local database, file paperwork and send ticket back to CQC with completion.

IDC must then remove all cables from customer cage, starting at customer IDF to MDF and to where circuit or uplink resides. Ex: IDC Switch or Circuit DMARC.

All cables will have labels removed and put back into storage.

Power disconnects;:

No power cables or circuit breakers can be removed or shutoff without following the steps outlined below, this applies to PDUs and RPPs.

- Verify the presence or not of current using an Amp Probe or similar recording device.

- Verification of the circuit and or breaker using' AS BUILT" drawings, if available.

- Verification of the labeling and or ID tags at the breaker or device to be powered down.

- Verification of the circuit using an electronic circuit tracer.

- Open breakers one at a time ONLY after all above steps are completed.

If there is any doubt whatsoever do not turn off the breaker

10.5.7. Network Events Matrix - AENS Alarms

The work activities listed below for Alarms represent the Network Event Criteria followed at the Web Hosting Data Centers. It is recognized that the matrix information assists in determining whether a work activity qualifies as a Network Event and that the Network Event Matrix for Alarm Activities below should only serve as a guideline.

ID	Planned Activity ALARMS	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric- tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
A01	Alarm Verification via BMS to DPS to NOC (sim- ulation)	0	Yes	No	No			
A02	Alarm Verification via a piece of equipment to BMS to DPS to NOC (requires equipment shutdown)	2		Yes	Yes	X	X	

ID	Planned Activity ALARMS	Risk Factor	Local MOP Required	Net Event (SMOP) Required	Time Restric-tion	Anytime Weekends (00:01 Sat - 23:59 Sun)	6 PM to 6 AM Any Day	10PM to 6AM Any Day
A03	Software updates to BMS / IPMS	1	Yes	No	No			
A04	Running cable, mounting nodes on the Data Center Floor or tying into or working on systems supporting the data center floor	2	Yes	No	Yes	X	X	
A05	Repair, installation or maintenance to electrical breakers that disrupt critical monitoring systems (BMS, Security, etc.)	4		Yes	Yes			X
A06	Maintenance or repair to BMS WITH (N+1)Redundancy	2	Yes	No	No			
A07	Maintenance or repair to BMS without Redundancy	3		Yes	Yes	X	X	
A08	Maintenance or repair to IPMS (alarm points) WITH (N+1) Redundancy	0	Yes	No	No			
A09	Maintenance or repair to IPMS (alarm points) without Redundancy	3		Yes	Yes	X	X	
	Planned Activity -DATA MAINTENANCE							
D01	MDF Maintenance -Quarterly Fast Iron and Big Iron Filter Cleaning	3		Yes	Yes			X

10.6. Web Hosting Network MFAB Process

The Web Hosting Data Centers uses the Communications, Command and Control Process (3CP) to manage service anomalies. This was enhanced in the middle of 2001 by the MFAB Process (Major Failure Action Binder).

MFAB is designed to be the first layer of incident management at the local level to effectively manage the communication of information within Web Hosting when there are incidents or disasters that affect or have the potential to affect the

network. It is organized to respond to incidents that affect Data Centers, equipment or people and to manage service restoration efforts as efficiently as possible. MFAB is the foundation upon which the 3CP Process builds. For information on 3CP refer to <u>AT&T Communications, Command, and Control Process</u>

The MFAB Process document outlines the Process for the Network Services that are supported by the Alpheretta GCSC. MFAB will be initiated by Web Hosting when there are customer affecting incidents.

11. Global Data Network Services

11.1. Introduction

This section of Ask Yourself covers the Global Data Network Services of Global Network Operations, and consists of the ATM/Frame Relay Data Network Control Center (DNCC), NSDNet, IP Network Reliability Center (IP NRC), Dial Platform/ Global Remote Access Dial Service (GRADS,) Voice over IP, ASI NRC, IBG, SSC, and IPSG. These groups are part of the AT&T Global Network Operations (GNO) business unit.

11.2. Service Protection - 'Ask Yourself' Questions and Methodology

Our goal of striving for flawless Global Data Network Service and loyal customers can only be reached if each of us takes personal responsibility for our jobs and works to resolve uncertainties or problems. AT&T Global Network Operations - ATM/FR DNCC, NSDNet, IP NRC, Dial Platform/GRADS, SSC, VoIP, IBG, ASI NRC & IPSG believes the 'Ask Yourself' methodology will explain how you can do your part to assure our goal is reached.

Please see Chapter 1, Section 1.2 of the Ask Yourself Handbook (ATT-002-200-715) for the 'Ask Yourself' Principals and Philosophy.

11.2.1. IP Connectivity Network Reliability Center (IP NRC), VoIP & Server Centers of Excellence and Data Network Control Center (DNCC)

The IP NRC, VoIP & Server NRC and the DNCC are responsible for the overall management of the AT&T data network services. These groups are responsible for all network connectivity and network elements between the customer facing port cards on the ingress and egress switches. These NRCs will not normally interface with any external customers except on a NOC to NOC level. The NRCs will:

• Provide fault management and change management of all the data networks

• Provide fault management, root cause analysis, traffic management

- Coordinate major failures via technical command and control

- Provide proactive maintenance via system alarm structure

- Ascertain specific customer impacts during failures

- Set priorities for facility network and specific customer restoration

- Coordinate facility restoration

- Manage scheduled and unscheduled maintenance

- Direct or execute repairs on network elements

- Perform change control management

- Manage and execute network upgrades

- Implement new network features and services

- Manage suppliers

- Provide 7 X 24 service

11.2.1.1. Index of Technologies and Technology Work Centers

Table 11-1- Work Centers and Technologies

Work Center	Examples of Supported Equipment and Work Activity	Work Center Telephone	Operations Manager's Name	Operations Manager's Telephone	Operations Manager's Pager / Pin
Legacy T- Data Layer 2 DNCC - ATM, FR	Lucent, Cisco ATM switches and Metro Data associated network components and backbone objects.	908-234-8572	Andy Thwaites	908-234-7967	908-672-4744 - Cell
Legacy SBC-Data Layer 2 DSNOC - ATM, FR	Lucent, Cisco, Alcatel ATM switch and associated network components and backbone objects.	469-624-2960	Mike Matthews	469-624-0152	888-630-8882 - Pager

Work Center	Examples of Supported Equipment and Work Activity	Work Center Telephone	Operations Manager's Name	Operations Manager's Telephone	Operations Manager's Pager / Pin
Legacy SBC Data Layer 2 DSNOC - ADSL	Adtran, Alcatel, DSL switch and associated network components and backbone objects.	469-624-2980	Ty Jordan	469-624-0502	888-648-9354 - Pager
Legacy SBC Infrastructure Build and Growth - ATM, FR, ADSL	Test and Turn-up of Lucent, Cisco, Alcatel ATM switches, Adtran & Alcatel DSL switches, and Redback Routers	469-624-2550	Bill Steed	469-624-0013	214-212-6961 - Cell
IP NRC - Layer 3- CBB, AGN, GO2, DSL, Legacy S IP Backbone	Manages backbone/ backbone routers in CBB, AGN & GO2 networks, cSBC routers.	800-225-3790 Prompt 4	Cliff Kimber-	314-770-3296	314-753-6955 - Cell
IP NRC Layer 3 - CBB, AGN, GO2, DSL, Legacy S IP Backbone	Manages backbone/ backbone routers in CBB, AGN & GO2 networks, cSBC routers.	800-225-3790 Prompt 4	Chris Gwaltney-Days	314-298-2097	314-239-2481-Cell
GRADS (Upgrades)	Manages/maintains dial up internet access infrastructure for consumer and business clients.	800-829-6236 Option 1 = To Open a Ticket Option 2 = For Status on a Ticket Option 3 = For an Escalation	Jeff Cindrich	314 770-3280	+1 314 308-7193-Cell
VoIP NRC	Manages the Consumer, Business and Global VoIP Networks	800-225-3790 Prompt 6 then dial ext.5255	Dennis Westphal	314-298-9472	314-406-5731-Cell
Server NRC	IP Server services and Infrastructure (ISP services, DNS, DHCP etc).	888-862-4867 Prompt 3	Steve Boyce	314-770-3237	314-308-9383-Cell
Legacy Networks	Global Frame Relay (GFN & AFN) support, EMEA SNA and Layer 3 network support (e.g. GMN).	+44 2392 475555 Option 2 - Frame (AGN/GFN) Option 3- SNA Option 4- Layer 3	Neil Hoare	44 2392 228619	None

Work Center	Examples of Supported Equipment and Work Activity	Work Center Telephone	Operations Manager's Name	Operations Manager's Telephone	Operations Manager's Pager / Pin
Backbone Management Center, Lisle IL	US SNA and Opennet	877-853-2777	John Armour	630-810-6031	

11.3. General Guidelines for Planned Activities

11.3.1. Introduction

The decision of when to perform a service should be based on the impact that a process failure can have on our customers, not on how well we can execute the change or the probability of process success. In addition, the impact of an unsuccessful execution of a planned activity on the Data Network regardless of whether it is a routine operation should weigh into the decision.

Approved changes that have the potential to affect the network as a whole or an entire Device must only be performed only during the scheduled Maintenance Window.

Table 11-2-Overview of Layer 2 and 3 Common Activities and Maintenance Windows

> **NOTE:**
> **DMW is Disruptive Maintenance Window; NDMW is Non- Disruptive Maintenance Window- see Table 11-3**

Activity	Frame/ ATM	cS Frame & ATM	VoIP/IP Server	CBB/cS-IS-MIS/PNT DIA/NVPN	AGN/GO2 (Layer 3 Intl)	AGN (Layer 2 International)	GRADS	Capacity/ LCM	Legacy AGN/ GFN
IP Routing Changes i.e. OSFP modifications and BGP modifications	no activities	no activities	00:00 - 06:00 CT M-F	Varies according to impact.	Varies according to impact.	(Major PNNI Addressing changes Weekend Windows)	no activities	no activities	no activities
ACL Changes-	no activities	no activities	00:00 - 06:00 CT M-F	Varies according to impact.	Varies according to impact.	No activities	no activities	no activities	no activities
Router/Switch/ Server upgrades		00:00 - 06:00 LST M-F		DMW	DMW				

Activity	Frame/ ATM	cS Frame & ATM	VoIP/IP Server	CBB/cS-IS-MIS/PNT DIA/NVPN	AGN/GO2 (Layer 3 Intl)	AGN (Layer 2 International)	GRADS	Capacity/ LCM	Legacy AGN/ GFN
Backbone router conf. & code upgrade, switch software & hardware upgrade, LIG, SIG & RIG, PXM boot firmware upgrades	3rd Sunday of the month	00:00 - 06:00 LST M-F	00:00 - 06:00 CT M-F	NDMW	NDMW	Weekend windows (non disruptive configuration 00:01 - 06:00)	18:00 -06:59 LRT except for service effecting	00:00 - 06:00 ET	Weekend (2 hour) Window
Router/Switch/ Server Installations									
Hardware Augments, Card Installs in existing element	no activities	00:00 - 06:00 LST M-F	00:00- 06:00 CT M-F	Varies by impact. DMW or NDMW.	Varies by impact. DMW or NDMW.	24 x 7 BAU	no activities	00:00 - 06:00 ET	24x 7 BAU
Cabinet installations								24x 7 BAU	
Circuit Provisioning:									
Customer Provisioning, Disco/re-terms, traffic migrations, etc	00:00 - 06:00 ET	24 x 7 BAU (Disruptive with Customer consent)	00:00- 06:00 CT M-F	Anytime	Anytime	24 x 7 BAU (Disruptive with Customer consent)		no activities	24 x 7 BAU (disruptive with customer consent)
Trunk Access Cabling				NDMW	NDMW	24 x 7 BAU (Disruptive Weekend Window)			24 x 7 BAU (Disruptive Weekend Window)
Customer Turn ups				Anytime	Anytime	24 x 7 BAU			24 x 7 BAU
Demand Maintenance:									

Activity	Frame/ ATM	cS Frame & ATM	VoIP/IP Server	CBB/cS-IS-MIS/PNT DIA/NVPN	AGN/GO2 (Layer 3 Intl)	AGN (Layer 2 International)	GRADS	Capaci-ty/ LCM	Legacy AGN/ GFN
Card replace-ments, chassis swap, cable swap outs, re-boot/power down	24:00 - 06:00 Friday to Saturday ET	00:00 - 06:00 LST	00:00 - 06:00 CT M-F	Varies by im-pact. DMW or NDMW.	Varies by impact. DMW or NDMW.	00:00 - 06:00 or (Disruptive Weekend Win-dows)	no time restric-tion	no activi-ties	Weekend (2hr Win-dow)s

Table 11-3-Overview of Layer 2 and 3 Controlling Centers and the Work Specific Tables which support them

Work Center	Examples of Supported Equipment and Work Activity	Table to Reference
Legacy T- Data Layer 2 DNCC	Lucent, Cisco ATM switches and Metro Data associated network components and backbone objects.	11-12 / 11-14
Legacy SBC-Data Layer 2 DSNOC - ATM, FR	Lucent, Cisco, Alcatel ATM switch and associated network com-ponents and backbone objects.	13-Nov
Legacy SBC Data Layer 2 DSNOC - ADSL	Adtran, Alcatel, DSL switch and associated network components and backbone objects.	13-Nov
Legacy SBC Infrastructure Build and Growth - ATM, FR, ADSL	Test and Turn-up of Lucent, Cisco, Alcatel ATM switches, Ad-tran & Alcatel DSL switches, and Redback Routers	17-Nov
IP NRC - Layer 3- CBB, AGN, GO2, DSL, Legacy S IP Backbone	Manages backbone/backbone routers in CBB, AGN & GO2 net-works, cSBC routers.	15-Nov
GRADS	Manages/maintains dial up internet access infrastructure for con-sumer and business clients.	20-Nov
(Upgrades)		
VoIP NRC	Manages the Consumer, Business and Global VoIP Networks	19-Nov
Server NRC	IP Server services and Infrastructure (ISP services, DNS, DHCP etc).	19-Nov
Legacy Networks	Global Frame Relay (GFN & AFN) support, EMEA SNA and Layer 3 network support (e.g. GMN).	18-Nov

11.3.2. General Work Schedule Guidelines: Layer 3

Table 11-4. Maintenance Window Descriptions: These general descriptions apply to cSBC NPVN, cSBC DIA, cATT MIS, cATT PNT, cATT AVPN, MOW AGN, cBLS DIA, cBLS NetVPN and MOW GO2.

Maintenance Window	Description
Disruptive	• Planned network changes will be performed during the "Disruptive" maintenance window, if they are considered to be disruptive. This typically involves maintenance and/or upgrades on network "edge" devices. • Disruptive maintenance is defined as work which will affect a customer's connectivity to the network. This generally means that the customer interface will be in a "down" status. Additionally, sustained periods of packet loss are considered to be disruptive. Disruptive changes include activities such as: ○ Software upgrades ○ Linecard replacement on the card hosting the customer connection ○ Router reloads
Non-disruptive	• Planned network changes will be performed during the "Non-disruptive" maintenance window, if they are considered to be non-disruptive. This typically involves mainte-nance and/or upgrades on network "core" devices, but may include activity at the network "edge" also. • Non-disruptive maintenance is defined as work which will not affect a customer's connectivity to the network. This means that the customer interface will still be in an "up" status. This may include: ○ Software upgrades on backbone routers which are "costed out." ○ New Capacity turn-ups, such as new Edge devices ○ Linecard insertions on the cards which do not host active customer connec-tions. • Note: Latency is considered to be a non-disruptive impact.
Anytime	• Planned network changes will be performed "Anytime" if any of the following criteria are met: ○ A customer has requested a change to configuration supporting their connection and this change would not impact any other customer's traffic or connectivity. (i.e. individual route changes or access-list requests)

Maintenance Window	Description
	° Network management changes can be executed with little or no risk to customer traffic. (i.e. snmp community strings, local passwords) ° Peering changes can be coordinated with peers with minor traffic shifts between redundant connections. ° A change will not affect customer traffic, even if executed incorrectly (i.e. inter-face description changes) ° An emergency condition exists and the network change will mitigate (or elimi-nate) the risk without customer impact (i.e.network element is in imminent danger (i.e. DDOS attacks, natural disasters, hardware defect)

Table 11-5. Non-Disruptive Maintenance Windows: Non-disruptive maintenance windows are utilized for non-disruptive network changes. All networks will utilize the same non-disruptive window, based upon the time zone in which the device is located.

Network	Days	Times	Timezone
Layer 3 Networks: • cT CBB, AGN, GO2 • cS IS Backbone • cB BRIB	Monday - Friday	12:00AM - 6:00AM	Local Router Time
Layer 2 Networks: • cT ATM/Frame, AGN • cS IS, ASI	Monday - Friday	12:00AM - 6:00AM	Local Router Time

Disruptive Maintenance Windows: Disruptive maintenance windows are utilized for disruptive network changes as outlined above. All networks will utilize customer notification for these types of changes. Please see the individual work specific tables for the customer notification lead time and the work times by activity.

11.3.3. General Work Schedule Guidelines: ASI ATM/FR and ADSL

A portion of the following information is found at the following URL: http://nop.sbc.com/fratm_mp/display.cfm?area=noc&view=1 . You will need your ATTUID and Intranet Password to access this site. Select NOC in the left column,

then Methods & Procedures. Information was obtained from the following documents: Outage Communication Process Overview (under Maintenance)

ASI must ensure the integrity of our network by scheduling our critical work activities at a time when a service interruption, planned or unplanned, will have the least possible impact to customer services.

The Maintenance Window document is intended to be an aid in making the determination concerning the optimum time to perform maintenance when the possibility of service interruption to the network is high. The Maintenance Window Policy may be altered within the constraints of the document to more strict times and days of application of the policy as is the situation with individually negotiated Service Level Agreement (SLA).

Examples of the application of a SLA could be Government Networks such as the State of California, State of Texas, or any other Customer with a specific contractual SLA.

The Disruptive Maintenance Window is defined as the time period between the hours of 12:00 AM and 6:00 A.M. Prep work may begin as early as 10:00 PM LRT (no work should begin after 5:00 AM.) The time between 10:00 PM and Midnight should generally be considered as preparation time.

The hours between midnight and 6:00 A.M. are referred to as the Non Disruptive Maintenance Window. This is normally considered to be the low traffic period and will minimize the impact to our customers in the event of a service interruption. Local management may specify a shorter time period based on local factors.

For more information concerning the ASI 13-State Maintenance Window policy see the M&P at: http://nop.sbc.com/ fratm_mp/showfile.cfm?file=mp\CM_User_Guide_PNNI_10-13-05.pdf .

All Maintenance/Upgrade activity must be properly scheduled in accordance with the ASI Change Management Process (Remedy - See section 11.10) with 14 days notification. Emergency maintenance activity may be performed if work must be scheduled less than 14 days prior to date of the maintenance. Unplanned maintenance can be performed without a change management request.

Table 11-6 ASI Maintenance Activities:

The following Table gives a general, high level over view of the maintenance activities for ASI.

Activity	12-6 AM M-F Local Time	Outside MW
Emergency maintenance - planned maintenance that must be scheduled less than 14 days.	X	X (Sat/Sun 12am - 6am)
PANICs - unplanned maintenance for all services and products	X	X
ATM / Frame Relay / Layer 3 ADSL		
Code Upgrades	X	
Hardware Implementation	X	
Customer Install Requests	X	X

Activity	12-6 AM M-F Local Time	Outside MW
Card Failures	X	
Shelf Replacement	X	
Intrusive Testing	X	
Power Supply Failures	X	
Traffic Migration	X	
Card Augments	X	
Check / Inspect cables for troubleshooting	X	
Class A Inspection	X	
Surveillance / Maintenance	X	X
IP Routing Changes		
i.e. OSFP modifications and BGP modifications	X	
ACL Changes-	X	
Router/Switch/Server upgrades		
OSS Software & Hardware	X	
Upgrade DSLAM to new Adtran Release	X	
Alcatel Upgrading DSLAM version	X	
Backbone router conf. & code upgrade, switch software & hardware upgrade	X	
Router/Switch/Server Installations		
New Router Growth		X
Hardware Augments, Card Installs in existing element	X	X
DSLAM Installation		
Hardware Augments, Card Installs in existing element	X	
Circuit Provisioning		
Customer Provisioning, Disconnect/re-terms, traffic migrations, etc	X	X
Trunk Access Cabling	X	
Customer Turn ups		X

Activity	12-6 AM M-F Local Time	Outside MW
Demand Maintenance		
Card replacements, chassis swap, cable swap outs, reboot/power down	X	

11.3.4. General Work Schedule Guidelines: AGN Layer 2

Approved changes to resolve a customer problem may be made outside of the scheduled Maintenance Window.

Changes that affect customer access to the AGN MGX network may be made outside of the Maintenance Window with prior customer approval.

In the Global Network, the 'Maintenance Windows' are defined as follows:

Table 11-7 Global Network Maintenance Windows

Window		Time					
		USA (EST)	LA (Argentina)	Canada (EST)	EMEA (CET)	AP (Japan Time)	Middle East (UAE)
Weekly (Every Sunday)	**Start**	3:00 AM	3:00 AM	3:00 AM	3:00 AM	2:00 AM Mon	03:00 Fri
	End	5:00AM	5:00 AM	5:00AM	5:00 AM	5:00 AM Mon	05:00 Fri
Monthly (Every 2nd & 3rd Sunday)	**Start**	12:00 AM	12:00 AM	12:00 AM	12:00 AM	00:00 AM Sun	00:00 AM Fri
	End	8:00 AM	8:00 AM	8:00 AM	8:00 AM	08:00 AM Sun	08:00 AM Fri
Extended (3 or 4 windows per Year)	**Start**				22:00 Saturday		
With 30 days Notice	**End**				5:00 Monday		

The extended 8hr windows are in place to facilitate AGN MGX software upgrades. These upgrades are designed to be non customer impacting. Disruptive work will still be primarily scheduled within regular 2hr maintenance window.

'Business hours' is defined as after 06:00 local time through 23:59 local time.

'After business hours' is defined as after 00:1 local time with all work completing prior to 06:00 local time.

All Maintenance/Upgrade activity must be properly scheduled in accordance with Global Change Process. Emergency maintenance activity may be performed for Severity 1 problems without a scheduled Change Control record if in accordance with Exception Process, detailed below, and if a Retrospective Change Control record is raised.

Exception Process:

Exceptions to the Change Control Guidelines may be made in order to resolve Severity 1 Customer Impacting Problems or if Critical Business need is justified.

Maintenance Window only activities may be performed at other times outside prescribed windows with the express written permission of both the Director Global Infrastructure or their assigned delegates, with the exception of PTT Circuit Testing.

Out of Local Business hours activities may be performed within Local Business hours with express permission of Global Transport Implementation and Technical Support Manager and DNCC Operations Manager or their assigned delegates.

The following Table gives a general, high level over view of the MoW activities for AGN.

Table 11-8 MoW AGN Layer 2 Overview:

AGN L2 - MoW	8hr Maintenance Windows	2hr Weekend Window	00:01 06:00 am	24x7 Business As Usual (BAU) Activity
Software Upgrade	X	X		
Switch Power Down Reboot	X	X		
Switch Chassis Swap	X	X		
Card Changes Single threaded node	X	X		
Infrastructure Circuit Testing (Not Sev1)	X	X		
Card Changes Trunk Cards			X	
Card Changes - Line Cards with Customer UNI's			X	
PXM Changes			X	
PXM Boot Firmware Upgrades			X	
Node Connect to Network			X	
VC Provisioning				X
Customer Capacity VC changes				X
Trunk/access cabling work				X
Line Card Capacity Install/Remove				X
Canalized E1/T1 Install/Remove				X
FTP of code to PXMs				X

11.3.4.1. VoIP/IP Server NRC General Guidelines

All planned maintenance activities will be performed in accordance with 'Ask Yourself' guidelines.

All Change Records/SMOP's must include a test plan.

Change Records/SMOP's must be submitted at least 72 business hours in advance (note: this requirement may be waived if SMOP is required to resolve a customer affecting issue).

The scheduled maintenance windows for The VoIP/IP Server NRC are as follows:

VoIP: 12-6 am CT, Monday through Friday

IP Cable MSO: 2-6 am CT, Monday through Friday

WorldNet/Internet Protect: 2-6 am CT, Tuesday and Thursday.

Table 11-9 VoIP/ Server Overview:

IP Server/VOIP NRC Maintenance Windows	12-6 AM CT M-F	2-6 AM CT M-F	2-6 AM CT Tu/Thu
Voice Over IP (VOIP) Services			
VOIP - Router/Firewall Maintenances/Upgrades	X		
VOIP - Softswitch Maintenances/Software Upgrades	X		
VOIP - Application Server Maintenances/Software Upgrades	X		
VOIP - Database Server Maintenances/Software Upgrades	X		
VOIP - IPBE Maintenances/ software Upgrades	X		
IP Cable ISP			
Router/Firewall Maintenances/Upgrades		X	
IDC LDAP Server Maintenances/Software Upgrades		X	
Mail (Post Office) Maintenances/Software Upgrades		X	
Mail (MRD) Maintenances/Software Upgrades		X	
Major Platform Release Software Upgrades		X	
Database Servers Maintenance/Software Upgrades		X	
WorldNet ISP			
Router/Firewall Maintenances/Upgrades			X

IP Server/VOIP NRC Maintenance Windows	12-6 AM CT M-F	2-6 AM CT M-F	2-6 AM CT Tu/Thu
Mail (Post Office) Maintenances/Software Upgrades			X
Mail (MRD) Maintenances/Software Upgrades			X
Major Platform Software Releases			X
Database Server Maintenances/Software Upgrades			X
Internet Protect			
Router/Firewall Maintenances/Upgrades			X
Database Server Maintenances/Software Upgrades			X

11.3.4.2. Remote Access GRADS General Guidelines

If the Planned Maintenance is service impacting the work should be completed in the windows listed below. If the work is non service impacting then it may be preformed during the off hours of 18:00 - 06:59 local time.

Table 11-10 Remote Access GRADS General Guidelines.

Window		Time (all times in Local time)						
		USA	LA	Canada	EMEA	AP	AP(BETA)
SIG Changes (AVTS/Secure IP) Monday	**Start**		3:00	2:00	3:00	2:00	
	End		5:00	4:00	5:00	5:00	
SIG Changes (AVTS/Secure IP) Tuesday *	**Start**						4:00
	End						6:00
SIG Changes (AVTS/Secure IP) Sunday, Tuesday, Wednesday, Thursday, Friday	**Start**	4:00					
	End	6:00					
LIG Changes (Local Interface Gateway) Monday	**Start**		3:00			2:00	
	End		5:00			4:00	
LIG Changes (Local Interface Gateway) Sunday	**Start**			5:00			
	End			7:00			
LIG Changes (Local Interface Gateway) Monday, Wednesday, Friday	**Start**				3:00		

Window	**Time (all times in Local time)**						
		USA	**LA**	**Canada**	**EMEA**	**AP**	**AP(BETA)**
	End				5:00		
LIG Changes (Local Interface Gateway) Sunday thru Friday	**Start**	3:00					
	End	5:00					
RIG Changes (Radius Interface Gateway) Monday	**Start**		N/A			2:00	
	End					4:00	
RIG Changes (Radius Interface Gateway) Sunday	**Start**		N/A	5:00	3:00		
	End			7:00	5:00		
RIG Changes (Radius Interface Gateway) Saturday	**Start**	3:00	N/A				
	End	5:00					

11.3.4.3. General Work Schedule Guidelines: Common Backbone-Layer 3

Table 11-11 IP NRC General Overview Matrix

IP Connectivity NRC Planned Matrix							
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Disruptive Maintenance Window**	**Non-disruptive Maintenance Window**	**Any Time**
Network Core	Avici	TSR	Linecard Install	Hot Swap	X	X	
			Linecard Replacement	Hot Swap	X	X	
			Backplane	Remove traffic from router	X	X	
	Cisco	CRS-1 & 12000	Linecard Replacement	Hot Swap	X	X	
			Linecard Install	Hot Swap	X	X	
			GRP/PRP Replacement	Reboot/shutdown router only if working on active/pri-	X	X	

IP Connectivity NRC Planned Matrix							
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Disruptive Maintenance Window**	**Non-disruptive Maintenance Window**	**Any Time**
				mary, fail-over if RPR+ is NOT running			
			Power Supply	Hot Swap	X	X	
			CSC/SFC	Remove traffic from router, Hot Swap	X	X	
			Air Filter Replacement	Hot Swap	X	X	X
	Juniper	T640	Linecard Install	Hot Swap	X	X	
			Linecard Replacement	Hot Swap	X	X	
			Routing Engine Swap	Remove traffic from router	X	X	
			Power Supply	Remove traffic, Power router down	X	X	
	All	All	Backbone Cabling Replacement	Maintenance Activity requires traffic removal from ckt.	X	X	
	All	All	Circuit Migration / Rehome CR-to-CR	Backbone links require traffic removal from ckt.	X	X	
	All	All	Router/RPM Addition to network	Includes Routing, NVT, and NMVT	X	X	
	All	All	Other Capacity Addition to network	Includes Routing, NVT, and NMVT	X	X	
	All	All	Backbone Router Configuration	ANY IP related/ routing configuration done on backbone/core routers	X	X	

IP Connectivity NRC Planned Matrix							
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Disruptive Maintenance Window**	**Non-disruptive Maintenance Window**	**Any Time**
	All	All	Code Upgrades	Router reload, requires traffic removal	X	X	
	All	All	OSPF,MPLS Deployment / Modifications	OSPF and/or MPLS link addition to network (software)	X	X	
	All	All	Receive ACL	Receive ACL	X	X	
	All	All	ACL 1,2,3	ACL's for NOC Access, SNMP	X	X	X
	All	All	Backbone Router Configuration	ANY non-IP configuration done on core routers (i.e. passwd, snmp comm string, description)	X	X	X
Network Edge	Cisco	7500	VIP/PA Replacement	Power router down	X		
			VIP/PA Install	Power router down	X		
			RSP Replacement	Reboot/shutdown router only if working on active/primary, fail-over if RPR+ is NOT running	X		
			Power Supply	Hot Swap	X		
			Chassis Interface	Power router down	X		
		12000	Customer Linecard Swap	Hot Swap	X		
			Uplink Linecard Swap	Hot Swap	X	X	
			Linecard Install	Hot Swap	X	X	

IP Connectivity NRC Planned Matrix							
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Disruptive Maintenance Window**	**Non-disruptive Maintenance Window**	**Any Time**
			GRP/PRP Replacement	Reboot/shutdown router only if working on active/primary, fail-over if RPR+ is NOT running	X		
			Power Supply	Hot Swap	X	X	
			CSC/SFC	Hot Swap	X		
			Air Filter Replacement	Hot Swap	X	X	X
	Juniper	ERX	Linecard Install	Hot Swap	X		
			Linecard Replacement	Hot Swap	X		
			SRP Replacement	Reboot/shutdown router only if working on active/primary	X		
		T640 & M320	Linecard Install	Hot Swap	X	X	
			Linecard Replacement	Hot Swap	X	X	
			Routing Engine Swap	Failover	X		
			Power Supply	Power router down	X		
	All	All	Uplink Circuit Rehome	Shut down router for rehome.	X		
	All	All	Uplink Circuit Migration	Shift traffic for layer 1 ckt migration.	X		
	All	All	Code Upgrades	Router Reload.	X		
	All	All	Y-Cable Toggle	Proactive change to redundant linecard	X		

IP Connectivity NRC Planned Matrix							
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Disruptive Maintenance Window**	**Non-disruptive Maintenance Window**	**Any Time**
	All	All	Customer Turn-up	Customer Enablement	X	X	X
	All	All	Customer ACL/ BGP ACL (prefix list)	ACL Modifications for Customer Interfaces	X	X	X
	All	All	Interface Description	Interface description line modifications	X	X	X
	All	All	Password, ACL 1,2,3	OOB / local password changes, ACL 1,2,3	X	X	X
	Cisco	All	debug command execution	diagnosing router troubles with appropriate vendor supervision or previous Labs approval	X	X	X
	All	All	BGP Aggregate Route Addition	Addition of Customer LAN Block Space, traditionally on AR's	X	X	X
	All	All	Peering Modifications	Traffic load determines maintenance window.	X	X	X
	All	All	SNMP Modifications	Community String Changes	X	X	X
	All	All	Receive ACL	Receive ACL	X	X	

NOTE:
Non-disruptive hours are defined in Table 11-4. Disruptive hours are defined in Table 11-12 and 11-5.

11.4. Activities Guidelines

Rules for monitoring Installation steps or performing maintenance activities:

Early notification is the key to everyone's success.

- **RED**= Activity includes (RED) steps that require GNFO coverage in the CO while the installation work is performed, possibly with no direct oversight. Some RED activities require work tasks by GNFO, which are defined in the SMOP/ Change Record. RED steps require center notification. Scheduling of Red Step activities must be coordinated with the GNFO by the supplier.

- **YELLOW**= Activity includes (YELLOW) steps that require the Control Center is notified prior to the start of the step Yellow steps pose a higher risk to the network than Green Steps, and may require direct involvement from the responsible Network Control Center. Direct Control Center involvement must be addressed in the SMOP. GNFO presence is not required in the Office during the execution of Yellow Steps.

- **GREEN**= Requires Control Center awareness while the installation work is performed. GNFO presence is not required in the Office during the execution of Green Steps.

Control Center = The responsible network maintenance module

Table 11-12 Frame Relay/ATM Legacy T Network:

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Weekends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
Switch software upgrade (BPX, AXIS, MGX, CBX500, GX550)	5	Yes				2nd & 3rd Sunday of the month	Red
Hardware Upgrades to existing elements(BPX, AXIS, MGX, CBX500, GX550or Network Management	5	Yes				2nd & 3rd Sunday of the Month	Red
Service Module Firmware upgrade in all FR switches. (EXCEPT the RPM Card) (BPX, AXIS, MGX)	5	Yes				2nd & 3rd Sunday of the month	Yellow except RED for BDFB PWR

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Weekends	6pm to 6am	12am to 6am	Installation Monitoring Requirement
Technology hardware upgrades (Component failures or increased re-liability)	5	Yes				2nd & 3rd Sunday of the month	Yellow except RED for BDFB PWR
Replacement of faulty backplane/chassis	5	Yes				Friday into Saturday X	Yellow except RED for BDFB PWR
Migrate existing cus-tomer traffic to a new (Card , Switch or Plat-form)	4	Yes				X	Red
RMA REQUEST	1	No	X				Green

NOTES:

1. Any trunk adds or disconnects which are done in the US Lucent ATM Network must be approved by the DNCC prior to any planning or implementation.

2. Before any work is done, that is identified as Red or Yellow, please call DNCC ((908)-234-8572) and let them know the FIC location of where the work is being done.

Table 11-13 ASI Maintenance Activities- Legacy SBC

Activity	Risk Factor (1-5) 5=High	CMR Required	12-6 AM M-F Local Switch Time	Business Hours M - F (6:00am - 6:00pm Local Time)	Off-Hours / All Other Times	Installation Monitoring Requirement
DSLAM Layer 2						
Emergency maintenance - planned maintenance that must be scheduled less than 14 days.	5	Y	X		X (Sat/Sun 12am - 6am)	
PANICs - unplanned mainte-nance for all services and prod-ucts	N/A	N	X	X	X	

Activity	Risk Factor (1-5) 5=High	CMR Required	12-6 AM M-F Local Switch Time	Business Hours M - F (6:00am - 6:00pm Local Time)	Off-Hours / All Other Times	Installation Monitoring Requirement
Code Upgrades	5	Y	X		X (Sat/Sun 12am - 6am)	YELLOW
Hardware Implementation	5	Y	X		X (Sat/Sun 12am - 6am)	RED
Customer Install Requests	1	N	X	X	X	GREEN
Card Failures*	4-Mar	Y/N	X	X	X	RED
Shelf Replacement	5	Y	X		X (Sat/Sun 12am - 6am)	RED
Intrusive Testing	4	Y/N	X		X	RED/YELLOW (red if cabling is being moved)
Power Supply Failures	5	Y/N	X	X	X	RED
Traffic Migration	NA					GREEN
Traffic Optimization	NA					GREEN
Card/Shelf Augments**	varies	N	X	X	X (Sat/Sun 12am - 6am)	RED
Check / Inspect cables for troubleshooting	5	N	X	X	X	RED
Class A Inspection	5	N	X		X (Sat/Sun 12am - 6am)	RED
Surveillance / Maintenance	N/A	N	X	X	X	YELLOW
DSLAM Layer 2- EMS						
Emergency Maintenance (planned)	4-Mar	Y/N	X		X (Sat/Sun 12am - 6am)	GREEN*
Emergency Maintenance (unplanned)	N/A	Y/N	X	X	X	GREEN
Software Upgrades (Code upgrades)	5	Y	X		X (Sat/Sun 12am - 6am)	GREEN
Patch installs	5	Y			X (Sat/Sun 12am - 6am)	GREEN
Hardware growth	3-Feb	Y/N	X	X	X	GREEN

Activity	Risk Factor (1-5) 5=High	CMR Required	12-6 AM M-F Local Switch Time	Business Hours M - F (6:00am - 6:00pm Local Time)	Off-Hours / All Other Times	Installation Monitoring Requirement
Hardware migration	5	Y	X		X (Sat/Sun 12am - 6am)	GREEN

*This is due to the NOC having no involvement in this type of mtce.

Table 11-14 Capacity Management/ Lifecycle Layer 2 Only

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	12am to 6am ET	Installation Monitoring Requirement
Slotting Cards in existing Cisco 7613 (INCS), 6513 (EGS),Juniper MX960 (NEW EGS), BPX, AXIS, MGX CBX500 or GX550 Switches	4	Yes		X	Yellow except RED for BDFB PWR
Installation of Fiber, Coaxial , or DS1 Cables to existing Cisco 7613 (INCS), 6513 (EGS),Juniper MX960 (NEW EGS), BPX, AXIS, MGX CBX500 or GX550 Switches	5	Yes	Normal In-stallation X		Yellow
Installation of new Cisco 7613 (INCS), 6513 (EGS),Juniper MX960 (NEW EGS), BPX, AXIS, MGX CBX500 or GX550 Switches and Network Management Cabinets	4	Yes	Normal In-stallation X		Yellow
Hardware Upgrades to existing network elements such as Cisco 7613 (INCS), 6513 (EGS),Juniper MX960 (NEW EGS), BPX, AXIS, MGX CBX500 orGX550 Switches or Network Management Equipment	5	Yes		X	Yellow except RED for BDFB PWR
CARD AUGMENT NEW CARDS	5	Yes		X	Yellow except

NOTE:

1.   Any trunk adds or disconnects which are done in the US Lucent ATM Network must be approved by the DNCC prior to any planning or implementation.

Table 11-15 IP NRC Maintenance Details/ Procedures

Rules for monitoring Installation steps or performing maintenance activities for the IP NRC:

IP Connectivity NRC Planned Maintenance Guidelines									
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Customer Notification - See Note 1**	**Maintenance Window, Any (Note 2)**	**Risk**	**Impact**	**Installation Monitoring Requirement**
Network Core	Avici	TSR	Linecard Install	Hot Swap	No	NDMW	2	L	RED
			Linecard Replacement	Hot Swap	No	NDMW	2	L	RED
			Backplane	Remove traffic from router	No	NDMW	2	L	RED
	Cisco	CRS-1 & 12000	Linecard Replacement	Hot Swap	No	NDMW	1	L	RED
			Linecard Install	Hot Swap	No	NDMW	1	L	RED
			GRP/PRP Replacement	Reboot/shutdown router only if working on active/primary, fail-over if RPR+ is NOT running	No	NDMW	1	L	RED
			Power Supply	Hot Swap	No	NDMW	1	L	RED
			CSC/SFC	Remove traffic from router, Hot Swap	No	NDMW	1	L	RED
			Air Filter Replacement	Hot Swap	No	Any	1	L	RED

IP Connectivity NRC Planned Maintenance Guidelines									
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Customer Notification - See Note 1**	**Maintenance Window, Any (Note 2)**	**Risk**	**Impact**	**Installation Monitoring Requirement**
	Juniper	T640	Linecard In-stall	Hot Swap	No	NDMW	1	L	RED
			Linecard Re-placement	Hot Swap	No	NDMW	1	L	RED
			Routing En-gine Swap	Remove traffic from router	No	NDMW	2	L	RED
			Power Supply	Remove traffic, Power router down	No	NDMW	2	L	RED
	All	All	Backbone Ca-bling Re-placement	Maintenance Activity, re-quires traffic removal from ckt.	No	NDMW	1	L	RED
	All	All	Circuit Migra-tion / Rehome CR-to-CR	Backbone links require traffic removal from ckt.	No	NDMW	1	L	RED
	All	All	Router/RPM Addition to network	Includes Rout-ing, NVT, and NMVT	No	NDMW	2	M	N/A
	All	All	Other Capaci-ty Addition to network	Includes Rout-ing, NVT, and NMVT	No	NDMW	2	M	N/A
	All	All	Backbone Router Con-figuration	ANY IP rela-ted/routing configuration done on back-bone/core rout-ers	No	NDMW	2	H	N/A
	All	All	Code Up-grades	Router reload, requires traffic removal	No	NDMW	2	L	N/A
	All	All	OSPF,MPLS Deployment / Modifications	OSPF and/or MPLS link ad-dition to net-	No	NDMW	3	M	N/A

				IP Connectivity NRC Planned Maintenance Guidelines					
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Customer Notification - See Note 1**	**Maintenance Window, Any (Note 2)**	**Risk**	**Impact**	**Installation Monitoring Requirement**
				work (soft-ware)					
	All	All	Receive ACL	Receive ACL	No	NDMW	2	M	N/A
	All	All	ACL 1,2,3	ACL's for NOC Access, SNMP	No	Any	2	M	N/A
	All	All	Backbone Router Con-figuration	ANY non-IP configuration done on core routers (i.e. passwd, snmp comm string, description)	No	Any	1	L	N/A
Network Edge	Cisco	7500	VIP/PA Re-placement	Power router down	Yes	Disruptive	3	H	RED
			VIP/PA In-stall	Power router down	Yes	Disruptive	3	H	RED
			RSP Replace-ment	Reboot/shut-down router only if working on active/pri-mary, fail-over if RPR+ is NOT running	Yes	Disruptive	3	M	RED
			Power Supply	Hot Swap	Yes	Disruptive	2	L	RED
			Chassis Inter-face	Power router down	Yes	Disruptive	2	H	RED
		12000	Customer Linecard Swap	Hot Swap	Only custom-ers on slot to be replaced.	Disruptive	2	L	RED
			Uplink Line-card Swap	Hot Swap	No	NDMW	2	L	RED
			Linecard In-stall	Hot Swap	No	NDMW	1	L	RED
			GRP/PRP Re-placement	Reboot/shut-down router	Yes	Disruptive	2	M	RED

			IP Connectivity NRC Planned Maintenance Guidelines						
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Customer Notification - See Note 1**	**Maintenance Window, Any (Note 2)**	**Risk**	**Impact**	**Installation Monitoring Requirement**
				only if working on active/primary, fail-over if RPR+ is NOT running					
			Power Supply	Hot Swap	No	NDMW	1	L	RED
			CSC/SFC	Hot Swap	Yes	Disruptive	1	L	RED
			Air Filter Replacement	Hot Swap	No	Any	1	L	RED
	Juniper	ERX	Linecard Install	Hot Swap	Yes	Disruptive	2	M	RED
			Linecard Replacement	Hot Swap	Yes	Disruptive	2	M	RED
			SRP Replacement	Reboot/shutdown router only if working on active/primary	Yes	Disruptive	2	M	RED
		M320 & T640	Linecard Install	Hot Swap	No	NDMW	1	L	RED
			Linecard Replacement	Hot Swap	No	NDMW	1	L	RED
			Routing Engine Swap	Failover	No	Disruptive	2	L	RED
			Power Supply	Power router down	No	Disruptive	2	L	RED
	All	All	Uplink Circuit Rehome	Shut down router for re-home.	Yes	Disruptive	3	H	RED
	All	All	Uplink Circuit Migration	Shift traffic for layer 1 ckt migration.	No	Disruptive	3	M	RED
	All	All	Code Upgrades	Router Reload.	Yes	Disruptive	5	H	N/A

						IP Connectivity NRC Planned Maintenance Guidelines				
Type	**Vendor**	**Router Series**	**Work Summary**	**Router Action**	**Customer Notification - See Note 1**	**Maintenance Window, Any (Note 2)**	**Risk**	**Impact**	**Installation Monitoring Requirement**
	All	All	Route Reflectors	Changes to Route Reflectors	ipfr-yes/other-no	Disruptive	3	M	N/A
	All	All	Y-Cable Toggle	Proactive change to redundant linecard	Yes	Disruptive	1	L	N/A
	All	All	Customer Turn-up	Customer Enablement	No	Any	1	L	N/A
	All	All	Customer ACL/BGP ACL (prefix list)	ACL Modifications for Customer Interfaces	No	Any	1	L	N/A
	All	All	Interface Description	Interface description line modifications	No	Any	1	L	N/A
	All	All	Password, ACL 1,2,3	OOB / local password changes, ACL 1,2,3	No	Any	1	L	N/A
	Cisco	All	debug command execution	diagnosing router troubles with appropriate vendor supervision or previous Labs approval	No	Any	1	L	N/A
	All	All	BGP Aggregate Route Addition	Addition of Customer LAN Block Space, traditionally on AR's	No	Any	3	M	N/A
	All	All	Peering Modifications	Traffic load determines maintenance window.	No	Any	3	M	N/A

IP Connectivity NRC Planned Maintenance Guidelines									
Type	Vendor	Router Series	Work Summary	Router Action	Customer Notification - See Note 1	Maintenance Window, Any (Note 2)	Risk	Impact	Installation Monitoring Requirement
	All	All	SNMP Modifications	Community String Changes	No	Any	1	L	N/A
	All	All	Receive ACL	Receive ACL	No	NDMW	3	M	N/A

NOTES:

1. Internationally, where necessary, customer notification is performed by Service Managers via CBUS. CBB notification is via email and/or BMP to CFO's.

2. Non-disruptive Maintenance Window (NDMW) is 12AM-6PM local router time. Core work that may be customer impacting is done in the Disruptive window. The MOW (AGN/GO2) Disruptive maintenance window is defined by service and region. See http://gnoc.web.att.com/pdf/2008AGN_Main_Windows.xls The Domestic U.S. Disruptive Maintenance window is defined by service. See Table 11-16.

3. Work (which requires the costing out of a router) may not be performed on two Core routers (Avici or CRS) at the same time in the same network.

Table 11-16 IP NRC Maintenance Details/ Procedures with Router Type, Service and Lead Time

Domain	Router Type	Service	Description	LeadTime	Mtce Days	WMS WorkTime
CBB	AR	MIS	MIS Access Routers	14	any day	00:01 AM - 06:00 AM
CBB	ASBR_CALA	AGN	ASBR routers that support Central and Latin America traffic across AS boundaries.	14	Sunday	03:01 AM - 05:00 AM
CBB	ASBR_EMEA	AGN	ASBR routers that support European and East Asian traffic across AS boundaries.	14	Saturday	21:01 PM - 23:00 PM
CBB	ASBR_AP	AGN	ASBR routers that support Asia Pacific traffic across AS boundaries.	14	Sunday	10:01 AM - 12:00 PM

Domain	Router Type	Service	Description	LeadTime	Mtce Days	WMS WorkTime
CBB	BR	Core	Cisco 12012 Backbone Routers (81ck, 82ck, etc.)	0	any day	00:01 AM - 06:00 AM
CBB	Cable	MIPNS	Network devices that are supported for Mediacom and/or other MSO's.	1	any day	00:01 AM - 06:00 AM
CBB	Data Center	Core	Routers in Bridgeton or Middletown, VA Data Centers.	14	any day	00:01 AM - 06:00 AM
CBB	DSL	DSL	Juniper ERX routers supporting AT&T's DSL service.	14	any day	00:01 AM - 06:00 AM
CBB	GAR	MIS	Cisco 12000 MIS Access Routers.	14	any day	00:01 AM - 06:00 AM
CBB	GIGR	Core	Cisco 12000 Internet Gateway (Private Peering) Routers.	0	any day	00:01 AM - 06:00 AM
CBB	Hot Spare	Core	Non-production spare CBB routers.	0	any day	00:01 AM - 23:59 AM
CBB	IPV4 RR	AVPN	AVPN IPV4 Route Reflectors	0	any day	00:01 AM - 06:00 AM
CBB	IRAR_EST	MIS	International MIS Access Routers supporting East Coast customers.	14	Sunday	00:01 AM - 05:00 AM
CBB	IRAR_PST	MIS	International MIS Access Routers supporting West Coast customers.	14	Saturday	00:01 AM - 06:00 AM
CBB	MAR [Ded PE]	PNT		14	Sunday	00:01 AM - 06:00 AM
CBB	MPLS RR	Core	MPLS Route Reflectors supporting PNT customers.	0	any day	00:01 AM - 06:00 AM
CBB	MSDP/MVPN RR	Core	InterAS VPN Route Reflectors	0	any day	00:01 AM - 06:00 AM
CBB	Multicast Rendezvous	Core	Flag that no two routers in this class can be worked at the same time.	0	any day	00:01 AM - 06:00 AM
CBB	Private MSE	AVPN	Private MSE routers support the AVPN service.	30	Sunday: - see Note 1.	00:01 AM - 08:00 AM

Domain	Router Type	Service	Description	LeadTime	Mtce Days	WMS WorkTime
CBB	TBR	Core	Flag that no two routers in this class can be worked at the same time.	3	any day	00:01 AM - 06:00 AM
L2	ATM	ATM	cAT&T Lucent Platform	30	Sunday: - see Note 1.	00:01 AM - 08:00 AM
L2	FR	FR	cAT&T Cisco MGX Platform	30	Sunday: - see Note 1.	00:01 AM - 08:00 AM
L2	IPFR	IPFR	cAT&T IPFR Platform	30	Sunday: - see Note 1.	00:01 AM - 08:00 AM
L2	RPM	AVPN	cAT&T AVPN Platform	30	Sunday: - see Note 1.	00:01 AM - 08:00 AM
L2	EGS		cAT&T Ethernet Transport Platform	14	Sunday: - see Note 1.	00:01 AM - 08:00 AM
SBC	Administrative	Internal	Blackhole routers, SBCis campus networks, or 3rd party support	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	BRAS	DSL	Broadband Aggregation Server, Juniper ERX routers supporting SBCis DSL service.	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Cable		Catalyst 6500's with firewall modules for Pleasanton and Richardson	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Catalyst		Cisco 2950 switches for Brix connectivity and 6500's in Richardson for server LAN	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Core (POP GSR)	Core	12000's collocated in Wiltel space for SBC POP connectivity	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Dedicated	DIA	Customer facing Edge device much like the MIS routers in Classic T	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Dist	Local POP access	Catalyst 6500's for POP access, DSL, Dial, etc.	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	DSL	DSL	Redback routers supporting SBCis DSL service.	9	Tuesday, Thursday	00:00 AM - 06:00 AM

Domain	Router Type	Service	Description	LeadTime	Mtce Days	WMS WorkTime
SBC	GSR	Core	12000 series routers in each POP for WAN connectivity to internet	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Internal Switch	Internal	Routers for trusted subnets for SBCis workstations.	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	NM	OOB	Terminal servers for console access to hardware in POPs	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	NVPN	NVPN	MPLS/VPN PE Edge routers	30	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	Public Peering	Peer	12000 series routers in Public intranet locations for Peering and Internet portal	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	SDED	SDED	Secure Dedicated (Edge) routers offering firewall protection to customers.	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	SRVR	SRVR	6500's support high-density server networks	9	Tuesday, Thursday	00:00 AM - 06:00 AM
SBC	VADM	Core	B2BVPN Tunnel to VPNPIX	9	Tuesday, Thursday	00:00 AM - 06:00 AM
BLS	BRIB	Core	BLS L3 Core Devices	5	Mon-Sun	00:00 AM - 06:00 AM
BLS	BLS_Edge	Edge	BLS L3 Edge Devices (DIA, NetVPN, DSL, Dial, RVAN)	5	Mon-Sun	00:00 AM - 06:00 AM
BLS	BLS_Govt	Edge	State & Local Govt	5	Mon-Fri	00:00 AM - 06:00 AM

Note 1: Actual dates are established on an annual basis and customers are notified. See the "2008 Window Dates" tab at http://gnoc.web.att.com/pdf/2008AGN_Main_Windows.xls for the hardcoded dates.

Table 11-17 Legacy S- ASI Layer 3 Networks

This Table covers work on the Legacy SBC Layer 3 Internet Services Redback- Juniper and Redback, LAC, Texan, Arkansas Networks.

Activity	Risk Factor (1-5) 5=High	CMR Required	12-6 AM M-F Local Device Time	Business Hours M - F (6:00am - 6:00pm Local Time)	Off-Hours / All Other Times	Installation Monitoring Requirement
Emergency maintenance - planned maintenance that must be scheduled less than 8 days.	4-May	Y	X		X (Sat/Sun 12am - 6am)	Varies call Controlling NRC
PANICs - unplanned maintenance for all services and products	N/A	N	X	X	X	Varies call Controlling NRC
Code Upgrades	5	Y	X			Yellow
Hardware Implementation	5	Y	X		X (Sat/Sun 12am - 6am)	Red
Card Failures	3	Y	X	X	X	Red
Shelf Replacement	5	Y	X		X (Sat/Sun 12am - 6am)	Red
Intrusive Testing	4	Y/N	X		X	Red
Power Supply Failures	5	Y/N	X		X (Sat/Sun 12am - 6am)	Red
Traffic Migration	4	Y	X		X (Sat/Sun 12am - 6am)	Yellow
Traffic Optimization	4	Y	X		X (Sat/Sun 12am - 6am)	Yellow
Card /Shelf Augments	5	N	X			Red
Check / Inspect cables for troubleshooting	3	Y	X	X	X	Red
Surveillance / Maintenance	N/A	N	X	X	X	Green
Emergency Maintenance (planned)	3-Feb	Y	X		X (Sat/Sun 12am - 6am)	Varies call Controlling NRC
Emergency Maintenance (unplanned) 1	N/A	N 2	X	X	X	Varies call Controlling NRC
Software Upgrades (Code upgrades) 1	5	Y	X		X (Sat/Sun 12am - 6am)	
Patch installs 1	5	Y	X		X (Sat/Sun 12am - 6am)	

Activity	Risk Factor (1-5) 5=High	CMR Required	12-6 AM M-F Local Device Time	Business Hours M - F (6:00am - 6:00pm Local Time)	Off-Hours / All Other Times	Installation Monitoring Requirement
Hardware growth 1	3-Feb	Y	X	X	X	
Hardware migration 1	5	Y	X		X (Sat/Sun 12am - 6am)	

NOTE:
1. For ASI Redback, LAC, Texan, and Arkansas these activities apply to: ATM / Frame Relay / Layer 2 EMS (Alcatel AMS, Adtran TAEMS, Cisco ANA, HPOV)

2. For ASI Redback, LAC, Texan, Arkansas a change Record must be entered.

Table 11-18 Legacy AGN/GFN Networks

Planned Activity	Risk Factor	AOTS Change	No Time Restriction
Switch software upgrade (BSTDX , CBX)	5	Yes	Sunday Change window Or Extended GSDA window
Service Module Firmware upgrade in all FR switches.	5	Yes Unless to fix Sev-1 problem	As per Certified procedures unless overridden by TCB
Technology hardware upgrades (Component failures or increased reliability)	5	Yes Unless to fix Sev-1 problem	As per Certified procedures unless overridden by TCB
Replacement of faulty backplane/chassis	5	Yes Unless to fix Sev-1 problem	As per Certified procedures unless overridden by TCB
Migrate existing customer traffic to a new Card , Switch or Platform	5	Yes Unless to fix Sev-1 problem	Generally performed with agreement of Affected Customer to a time agreed with the customer otherwise this is scheduled in a change window.

Table 11-19 .VoIP GNFO Maintenance Table

Planned Activity	Risk Factor	N.E. Req'd	No Time Restriction	Weekends	6pm to 6am	12am to 6am CT	Installation Monitoring Requirement
Assist in Trouble-shooting T1 cable path, by inserting and re-moving loops at DSX locations. Exercising jacks and checking cable connections	5	Y				X	Red
Swapping cables with-in the VoIP cabinets for the purpose of mainte-nance	5	Y				X	Red
Replace or reset gate-way	5	Y				X	Green
Apply Patches	5	Y				X	Green
Upgrade Existing com-ponents/servers	5	Y				X	Green
Traffic Migration	5	Y				X	Green
Equipment Installa-tion/ Equipment Re-moval	5	Y				X	Red
ACL changes/routing changes	5	Y				X	Yellow
Router Installations/ Upgrades	5	Y				X	Red

Table 11-20 GRADS GNFO Maintenance Table

Planned Activity	Risk Factor	N.E. Req'd.	No Time Restric-tion	Weekends	6pm to 6am	6a-8a and 4p-6p Edge of tour	12am to 6am	Installation Monitoring Require-ment
Perform mainte-nance as requested by GRADS on failed	0	N	X					

Planned Activity	Risk Factor	N.E. Req'd.	No Time Restric-tion	Weekends	6pm to 6am	6a-8a and 4p-6p Edge of tour	12am to 6am	Installation Monitoring Require-ment
UPS units located in GRADS cabinets, where installed.								
When there is an outage, reconnect or replace DSx cables, patch cabling, and other interconnecting cabling.	0	N	X					
When there is an outage, replacement of cables to GRADS Cabinets, DSX panels, hubs, switches, routers, modem shelves.	0	N	X					
Replace or reseat modem, NIC, NAC, NMC, and other modem shelf and router cards.	0	N	X					
When FSS is to upgrade or replace switch or router and its firmware, assist as may be needed, and aid GRADS in configuring. SMOP required.	5	Y					Normal Upgrades	Yellow
								Except
							X	RED for BDFB PWR
							This is scheduled w2 weeks notice	
When there is an outage, reboot equipment as may be requested by GRADS.	0	N	X					

11.5. Data Network Services Process

Providing our customers with reliable, uninterrupted service requires that we make network reliability our number one priority. Everyone involved in supporting and maintaining the AT&T Network needs to be fully informed about work performed on the Network.

During a network incident, there are tiers that allow for the flow of communication within the operations groups and between other AT&T units, local, regional, and corporate organizations. It is critical that clear and accurate information concerning the network incident be communicated to all teams involved.

To view the Data Network Control Center (DNCC) Process or the Internet Protocol (IP) Process, go to http://datapro-cess.its.att.com and choose either "ATM/FR" then "DCN" button or choose "IP" then the appropriate topic.

11.6. Incident Management Process

AT&T Global Network Operations uses the 3CP (Command, Control, Communications) Process to manage incidents as they occur in the network. When an anomaly occurs that threatens or actually impacts the performance of the network, the response is managed by the GNOC staff through a practiced and proven incident management command process called 3CP. Network anomalies are defined by customer impacting thresholds determined by each of the network technol-ogies. The Data Networks use 2 processes to manage network anomalies before they reach thresholds which are managed by the GNOC. These processes are called MFAB and PANIC.

MFAB (Major Failure Action Binder) is an escalation and notification procedure. MFAB specifies a minimum set of actions to be taken in the event of a major disruption of service. Frame/ATM/IP has adopted this process. MFAB is used to provide guidelines to expedite the solution of major service outages, and to keep upper management informed of outages that may pose a Public Relations event. As a quality improvement tool MFABs are studied to look for process improvements and identify trouble spots when used in conjunction with Root Cause Analysis (RCA).

VOIP MFAB Criteria can be viewed at:http://dataprocess.its.att.com/Documents/VOIP/VoIP_MFAB_Process.doc

Extraordinary Network events are defined to be either planned or unplanned Network outages. The existence of these outages needs to be communicated both within ASI and to other cS entities. Planned Network outages are governed by the ASI Change Management Process. Information regarding the outages is proactively communicated as part of that process. Unplanned Network outages are reactively worked and a PANIC notification is issued. For more information on the criteria for the PANIC process, see the following document at http://nop.sbc.com/fratm_mp/showfile.cfm?file=mp \DSNOC-RR.pdf (page 8).

MFAB & PANIC roll into the 3CP Process for Incident Management. 3CP can be reviewed at the GNOC web site: http://gnoc.web.att.com/default.htm

11.7. Service Method of Procedure (SMOP) / Change Record

A Service Method of Procedure (SMOP) or Change Record is a detailed document which describes a work methodology to line personnel who perform potential service affecting activity in GNO controlled locations. Chapter 2 of Ask Yourself provides details on SMOPs.

11.8. Service Method of Procedure/Network Event Mechanism (SNEM)

The SNEM System and S/SNEM (Supplier SNEM) provides an automated method for AT&T personnel and the Vendor/ Supplier to create, submit for approval, retrieve, print, and store the SMOP forms. SNEM can be accessed at <u>SNEM Login</u>

A Network Event is defined as any planned work that has the potential to interrupt or degrade AT&T Customer service.

11.8.1. Obtain Data Network Services Network Event Number

Network Event numbers are used for documenting work that is to be performed. In some cases development groups who are requesting the work fill out the form; in other cases the form is filled out by an operations staff member; in a third case GNFO fills out the SMOP.

11.8.2. Waivers to Data Network Services Approval Guidelines

The Network Events Process is designed to provide oversight of network activity with the goal of minimizing risk to AT&T customer service. If an exception is required for planned maintenance work during a restricted period please complete the form at <u>AT&T Global Network Operations Center</u> .

11.8.3. Immediate Maintenance Emergencies

•   Planned Maintenance-- Hardware and software upgrades and other maintenance work known and planned in advance. These require the work to be completed using a standard, tested method of procedure. This work must be reviewed using the Matrices in Section 11.4 to determine the appropriate time for the work.

•   Unplanned Maintenance-Service is disrupted or in imminent danger of disruption. Customers are affected. A MOP is required but work may go ahead according to the table below.

Where service has been disrupted or disruption is imminent and customers are impacted, repair/restoration procedures may proceed without adherence to the formal SMOP/Network Events Process, as directed by the appropriate DNCC maintenance group. However, the parties involved with the emergency procedure should have a plan that incorporates the considerations addressed in the formal SMOP/Network Events Process. This would be considered Unplanned Maintenance.

When service has been degraded and there is no customer impact then the work should be completed in the next appropriate maintenance window using technically accurate written work instructions and coordinated through the center. This work would fall into the category of Planned Maintenance.

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Table 11.16- Unplanned vs. Planned Maintenance Guidelines

MOP and SMOP Guidelines				
Type	**Classification**	**MOP Requirement**	**Requires SNEM Network Event**	**Examples**
Fault Management	Unplanned - Emergency Maintenance (any network condition which is currently negatively impacting customer availability or performance)	Tier 2 - technically accurate written work instructions	N	Any condition in which customers are out of service or are experiencing performance issues such as excessive latency or packet loss.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) Low or Medium Risk/Impact	Tier 2 - technically accurate written work instructions	N	Correcting simplex conditions (redundant processor cards, power supplies), chronic network components, and normalizing workarounds.
	Planned- Demand Maintenance (Resolving fault conditions which may be deferred until the next available* maintenance window) - High Risk & High Impact	ATS approved formal MOP with Risk Assessment.	Y	Correcting major network anomalies (i.e. chassis swaps, software upgrades to resolve critical bugs/vulnerabilities, and network architecture changes)
Change Management	Planned- Expedited Software/Hardware Upgrades	ATS approved formal MOP with Risk Assessment	Y	Critical capacity augments to resolve projected performance issues and/or enable customer revenue streams.
	Planned- BAU Software/ Hardware Upgrades	ATS approved formal MOP with Risk Assessment	Y	All other planned changes.
* Next available window means the first window in which the right procedure, parts, and people are available to correct the condition.				

11.9. Remedy - Change Management c- SBC ASI

A portion of the following information is found at the following URL: http://nop.sbc.com/fratm_mp/display.cfm? area=noc&view=1 . You will need your ATTUID and SBC Intranet Password to access this site. Select NOC in the left column, then Methods & Procedures. Information was obtained from the following documents found in the 'Change

Management Process' section: Creating CMRs, Change Management / Bulk Ticket Process, and Change Management - Field Explanations.

Change Management is used to schedule work being performed in the Legacy S ASI Data Services Network. Work scheduled can be either disruptive or non-disruptive (this includes emergency and non-emergency requests). This dictates whether the General Manager (GM) Review Board approves the requests. If the request is disruptive, it must go through the pre-approval process. If the request is non-disruptive, the GM Review Board may/may not review the request. All requests go through either the Infrastructure Build Group (IBG), for growth or decommission requests, or the Data Services Network Operations Center (DSNOC), who handle maintenance requests.

The objective of the Change Management Process (CMP) is to maximize internal utilization and maintain a high level of Quality of Service for both internal and external ASI customers.

The CMP is a Remedy based design that provides a centralized tool for Maintenance Engineering, Data Engineering, Network Centers (IBG, DSNOC, DOC, DSC), and NP&E.

Using the CMP as a tool, the users are able to schedule, review, verify, and cancel changes to the Network Elements. The extended results are to reduce unnecessary network outages, duplicate work assignments for personnel, and create a seamless operating environment.

Due to several Service Level Agreements (SLAs) across the various regions, a standard interval for Customer Notification is a **minimum** of **(14)** days to the customer. Any existing SLA needs to be considered as the over riding priority agreement in regard to customer notification (CN). The reason for the additional 4 days is for the GM Review board to review the CMRs and approve or deny them. This still gives ample time to notify customers if the CMR is approved. No disruptive request is accepted (even on an expedite) with fewer than 14 days **unless the 'Request Type' is EMERGENCY DISRUPTIVE**. If an activity is labeled as DISRUPTIVE with fewer that 18 days notice the originator will be prompted to change the 'Request Type' to **EMERGENCY DISRUPTIVE** prior the originator clicking the SCHEDULE/CLOSE button.

Customer Notification (CN) is a separate process that is accessed and initiated by the CMP at the time that the NOC/IBG completes the Approved and Scheduled process. Customer notification distributes notifications for planned and outage events for ATM/FR, DSL, Partner Networks, SBC Long Distance and specific Redback Router configurations. There are three requirements for the initiation of a notification through Change Management

The following list of guidelines need to be followed when submitting a Change Management Request (CMR), whether a single CMR or a bulk ticket.

Timeframe Parameters:

•   CMRs **MUST** be submitted 18 days before the scheduled event.

•   For **DISRUPTIVE** work the CMR can only be scheduled on Tuesdays and Thursdays, 12 am to 6 am, local element time.

•   For **NON-DISRUPTIVE** work the CMR can only be scheduled Mondays, Wednesdays, and Fridays from 12 am to 6 am local element time.

•   Major software upgrades are considered exception to the above rules, however approval from upper management is required.

- **EMERGENCY DISRUPTIVE** CMRs are an exception as they need to be scheduled for the next maintenance window. A CMR qualifies for this if the work is detrimental for network health or customer service restoration. This should be stated in the 'Work Summary' and the 'Notes/Request Comments' section of the CMR.

The Infrastructure Build Group (IBG) is responsible for pre-approving or approving Growth CMRs. Growth CMRs are created for the following activities.

- **Decommissions:** Removing a network element from the live network.

- **Software Upgrades:** If a new software release for network elements needs to be performed, the IBG is responsible for performing this action.

- **Hardware:** Adding new cards within a network element; for example adding LT cards to a DSLAM already active. This includes any out-of-band access equipment.

- **Card Augmentations:** These are performed if an unutilized card is currently in an element that Engineering determines can be used elsewhere.

- **New Bays or Shelves:** Adding new bays or shelves to an existing element or office.

- **Inventory**: If office inventory needs to be scheduled.

- **Migrations of Infrastructure Circuits:** The IBG performs migrations on infrastructure circuits only (CLFI circuits). Examples of these circuits are Internodals, DSLAM links, OCD links.

> **NOTE:**
> **The IBG DOES NOT move customer circuits. This is performed by the Data Services Provisioning Center (DSPC) located in Austin, TX.**

The ASI Data Services Network Operations Center (DSNOC) is responsible for pre-approving or approving Maintenance CMRs. These CMRs are created for the following reasons:

- **Hardware Replacements:** The DSNOC is the only team responsible for the replacement of cards/plugs within the Data Services network. These CMRs should be scheduled for maintenance window activity.

- **INL Optimizations:** If an internodal trunk is near or at capacity, a CMR is issued to the DSNOC to optimize the paths on a specific trunk.

- **GUI Software Upgrades:** A '**Maintenance | Software**' option is available only for software upgrades to the Alcatel 5620, Lucent Naviscore, or any other GUI upgrade

> **NOTE:**

The DSNOC is NOT responsible for any type of migration. The DSNOC only performs INL optimizations.

Change Management requests allow for all planned maintenance that may or may not impact customer service. All unplanned maintenance falls under the PANIC process (see section 11.7). Change Management requests can be auto-populated after the creation of a T1 (Trouble Ticket) has been generated and requires work to be performed.

11.9.1. Exceptions to Remedy Change Management Approval Guidelines

The Change Management Process is designed to provide approval of network activity with the goal of minimizing risk to any customer service. If an exception is required for planned maintenance work during a restricted period all users need to be aware that the work will require additional approval by upper management, up to the VP level. The work may be cancelled, rescheduled, or processed depending on the nature of the work and the criticalness of the work. Upon submission of a change request in Remedy, users will be prompted with warnings identifying all restricted areas. Users have the ability to continue with the request or alter the information to perform the work outside of the restricted parameters.

11.9.2. Immediate Maintenance Emergencies

•   **Planned Maintenance** - consists of Hardware and software activities or other maintenance work that is known and planned in advance. These require the work to be submitted 18 days in advance. Consisting of the required 14 day notification requirement to all customers and allowing an additional 4 days for questions, approvals, or resubmissions.

•   **Emergency Maintenance** - Service is disrupted or in imminent danger of disruption and can not be scheduled out more than 14 days, but can be scheduled to be worked during a maintenance window. Customers are affected. Approval for emergency work may be provided by DSNOC Manager on duty or Technical Director for the DSNOC if after hours.

•   **Unplanned Maintenance** - Service is disrupted or in imminent danger of disruption and can not wait until the next maintenance window. Customers are affected. DSNOC follows the PANIC process (see section 11.7).

    Where service has been disrupted or disruption is imminent and customers are impacted, repair/restoration procedures may proceed without adherence to the formal Change Management Process, as directed by the DSNOC Manager. However, the parties involved with the unplanned work should have a plan that incorporates the considerations addressed in all situations. Based on the criteria, PANICs could result in an NACP being required. This would be considered only for Unplanned Maintenance and is identified as a Level 4 PANIC.(See the PANIC process in section 11.7)

    When service has been degraded and there is no customer impact then the work should be completed in the next appropriate maintenance window using a non-disruptive request and coordinated through the center. This work would fall into the category of Planned Maintenance.

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11.10. Safety and Environment

See Ask Yourself Chapter 5 for information regarding Safety and Environment.

11.11. Security

See Ask Yourself Chapter 6 for information regarding Security

11.12. Disaster Recovery

A disaster declaration occurs when the structure and/or all/most of the equipment which is deemed mission critical to an operation, becomes unusable. Business Continuity and Network Disaster Recovery planning includes the following components: Network (CO), Systems (data/applications), and Work Center.

11.12.1. Data Network Disaster Recovery

Data Network Disaster Recovery is provided by specially constructed tractor-trailers that are equipped with platform specific Switches and Routers. Each Data Network Disaster Recovery Trailer contains a Data Communications Network (NM-DCN) cabinet that allows Switch and Network Management from the appropriate remote Network Control Center. Each NDR trailer is considered to be "self-contained", as they are each equipped with their own On-Board Batteries, Rectifiers, Generators and Heating Ventilation and Air Conditioning system (HVAC). NDR/BCS commits to be on site within 24 hours, with recovery completed within 96 hours of a Disaster Declaration by GNOC.

11.12.2. Network Disaster Recovery - Frame Relay

Frame Relay Network restoration is provided by two trailers; one 40' trailer equipped with one Cisco MGX45, two Cisco MGX8850 and three Cisco BPX8620 switches, the second 20' trailer equipped with one Cisco MGX8850 and two Cisco BPX8620 switches. Plans are underway to triple the capacity of the second trailer by upgrading to a 40' trailer. When complete, this increased NDR switching capacity will allow us to replicate the switch configurations for the majority of CO's within the Frame Relay Network. Frame Relay Network Disaster Recovery Plan currently has an A-Level Certification from Corporate Business Continuity Planning (C-BCP).

11.12.3. Network Disaster Recovery - ATM

ATM Network restoration is provided by single trailer that has been equipped with eight Lucent CBX500 and three Lucent GX550 switches. As constructed, the ATM NDR Trailer can provide total recovery to the largest central office with an ATM presence within AT&T's Network. ATM Network Disaster Recovery Plan currently has an A-Level Certification from Corporate Business Continuity Planning (C-BCP).

11.12.4. Network Disaster Recovery - IP

IP Network restoration is provided by single trailer that has been equipped with a comprehensive combination of Avici, Cisco, and Unisphere switching and routing equipment. As constructed, the IP NDR trailer can provide recovery to the largest SNRC within AT&T's Network. IP Network Disaster Recovery Plan currently has an A-Level Certification from Corporate Business Continuity Planning (C-BCP).

11.12.5. Systems Disaster Recovery - Frame Relay and ATM

Systems that support the Frame Relay and ATM platforms are co-located at 30 Knightsbridge Road in Piscataway NJ. 30 Knightsbridge is considered a hardened facility. A comprehensive suite of Mission Critical Systems are replicated at Denver Mini-Computer Maintenance Operations Center (MMOC). A partnership between the OSS Development Platform Management Group and the NDR Team exists to ensure Systems recovery remains current. Each of the three plans that comprise DNCC Systems Disaster Recovery (Cisco WAN Manager, ATM Network Management, and FR/ATM OSS/ App's) currently has an A-Level Certification from BCSS.

11.12.6. Systems - IP

Services and platforms supported are Common Backbone, Dial Platform, DSL, OC192, WorldNet, and Voice over IP and IP Cable Services. Disaster Recovery planning for Network systems is supported by the AT&T IT organization.

11.12.7. Work Center Disaster

Disaster Recovery for the Data Network Control Center in Bedminster New Jersey and the IP Network Control Center in Bridgeton Missouri would be accomplished by relocating our work force to a virtual office environment. This includes employees' home locations or an available alternate AT&T location. The employees in the DNCC are equipped with the tools capable of supporting the virtual office recovery strategy.

11.12.8. Work Center Disaster -DNCC

Data Network Control Center disaster recovery strategy is to relocate the DNCC workforce to a virtual office environment. . As soon as an event occurs ATM, Frame Relay, and Metro Data Network Support team members will travel to their homes or an available alternate AT&T Location. , The employees in the DNCC are equipped with the tools capable of supporting the virtual office recovery strategy. . 100% of critical alarms would be attended to less than two hours of a DR event. The total recovery time objective for Bedminster is 100% of alarms within 24 hours of a DR occurrence. The DNCC Disaster Recovery Plan currently has a valid accreditation from the Corporate Business Continuity Planning (C-BCP) organization.

11.12.9. Work Center Disaster - IP NCC

IP Network Control Center (NCC) disaster recovery strategy is to relocate the NCC workforce to a virtual office environment. As soon as an event occurs the IP & VOIP Support team members will travel to their homes or an available alternate AT&T Location. The employees in the IP NCC are equipped with the tools capable to provide comprehensive job-functionality for network support and engineers to manage the Layer 3 Networks from a virtual office location. Recovery time objectives are 100% of call receipt and 40% of critical alarm resolution in less than four hours of a DR event. The total recovery time objective for Bridgeton NCC is 100% efficiency for call receipt and trouble resolution of all alarms within 48 hours of a DR occurrence. IP NCC Disaster Recovery Plan currently has a valid accreditation from the Corporate Business Continuity Planning (C-BCP) organization.

> **NOTE:**
> **All of the above, with the exception of Network Recovery, should be transparent to the Network Field Services.**

11.12.10. ASI Disaster Recovery - ADSL, Frame Relay and ATM

The purpose of the ASI Multi-Hazard Disaster Recovery Plan is to provide guidance for the identification of critical business activities, critical systems, site information and personnel plans to focus the work efforts to effect recovery and restoration of the AT&T EBS Data Services Network Elements, Element Management Systems and/or Admin Spaces. The Pandemic plan for the ASI NOC provides additional guidance in the unique instance of a pandemic situation that directly affects daily operations. These plans as well as other disaster recovery information are located at http://operations.asi.sbc.com/network/htm/PandemicUpdates.shtml .

12. Glossary

12.1. Abbreviations, Acronyms and Definitions

AC - Alternating Current

ACP - AT&T Corporate Practices

AENS - AT&T Enhanced Network Services

ALS - AT&T Local Services

ANS - AT&T Network Services

ANSER - AT&T Network Servicing System

ANSR - AT&T Network Security Requirements

AOTS - AT&T One Ticket System

BCPA - Basic Customer Provided Access

BDCBB - Battery Distribution Circuit Breaker Box

BDFB - Battery Distribution Fuse Board

BWM - Broadcast Warning Message

CAA - Common Access Area

CAS - Custom Access Services

CCITT7 - Common Channel International Signaling System 7

CCS - Common Channel Signaling

CCS7 - Common Channel Signaling System 7

CGA - Carrier Group Alarm

CIA - Common Interface Arrangement

CLEC - Competitive Local Exchange Carrier

CLLI - Common Language Location Identification

CN - Change Notice

CNI - Common Network Interface

CNMC - Cable Network Management Center

CO - Central Office

COE - Center of Excellence

CPAD - Capacity Planning and Delivery

CPR - Cardio Pulmonary Resuscitation

CRT - Cathode Ray Tube

CSI - Corporate Security Instructions

DACS - Digital Access Cross - connect System

DC - Direct Current

DCME - Digital Circuit Multiplication Equipment

DCMS - Digital Circuit Multiplication System

DCO - Digital Central Office

DCOST - Digital Central Office Surveillance and Test System

DCTN - Defense Combined Telecommunications Network

DDM1000 - Dual Digital Multiplexer (DSI - DS3 ATT)

DEMS - DACS (Digital Access Cross-connect System) Element Management System

DMACS - Distributed Monitoring and Control System

DNCC - Data Network Control Center

DOM - Digital Office Manager

DSO - Digital Signal - 0

DSX - Digital System Cross-connect

DTMS - Digital Test Maintenance Station

EC3200 - Echo Canceller 3200 type

ECP - Electronic Change Procedure

ECS - Extended Call Store

EH&S - Environment, Health & Safety

ESMOP - Electronic Service Method of Procedure

FAOS - Future Actionable Opportunity Stock

FMG - Facility Maintenance Group

FRS - Full Remote Shelf

FTA - Foreign Telecommunications Administration

FTS - File Transfer System

GCSC - Global Customer Service Center

GNFO - Global Network Field Operations

GNOC - Global Network Operations Center

GNSC - Global Network Service Center

GRADS - Global Remote Access Dial Service

GSDN-CSC - Global Software Defined Network - Customer Service Center

GSDSNCC - Global Switched Digital Services Network Control Center

GTP - General Telemetry Processor

HFL - High Frequency Line

HVAC - Heating, Ventilation, Air-conditioning

ICTRC - International Customer Trouble Reporting Center

IDC - Internet Data Centers

IFSC - International Facsimile Service Center

IHQ - International Headquarters

ILEC - Interoffice Facilities Engineering Center

INRG - International Network Routing Group

IRIS - System Interactive Response Implementation System

ISC - International Switching Center

ISDN - Integrated Services Digital Network

ISM - International Systems Maintenance

ISSG - Integrated Service Support Group

LGX - Lightguide Cross-Connect (LGX®)

LSAC - Lease Space Arrangement Center

MFAB - Major Failure Action Binder

MOP - Method of Procedure

MoW - Most of World

NCP - Network Control Point

NCP&D - Network Capacity Planning & Delivery

NCS - Network Collection Services

NEMOS - Network Event Management Operations System

NESAC - Network Engineering Service Access Center

NI - Gateway Network Interface Gateway

NMC - Network Management Center

NRC - Network Reliability Center

NS - Network Systems

NTAG - Network Technical Assistance Group

NTE - Network Terminating Equipment

NWT - Network Time

OCC - Other Common Carrier

OCLS - Outside Plant Closed Loop System

OJT - On the Job Training

ORC - Overall Restoration Coordinator

OSHA - Occupational Safety and Health Act

OSP - Outside Plant

OSPEC - Outside Plant Engineering and Construction

OSPS - Operator Service Position System

OSS - Operations Support Systems

OSWF - On-site Work Force

OTDR - Optical Time Domain Reflectometer

PCI - Planned Cable Intrusion

PCO - Plant Control Office

PDE - Power Distribution Equipment

PDU - Power Distribution Unit

PFE - Power Feed Equipment

PFQA - Performance Quality Assurance

PIN - Packet Integrated Network

PIU - Primary Interconnection Unit

PNI - Packet Network Interface

POP - Point of Presence

PQRS - Power Quality Records System

PROV - Provisioning

PTSG - Power Technical Support Group

RMSD2 - Remote Measuring System Digital 2

RNC - Restoration Node Controller

RNM - Regional Network Management

RTE - Restoration Test Equipment

RTS - Remote Test System

SAM - Synchronous Asynchronous Multiplexor

SARA - Superfund Amendments and Reauthorization Act

SDI - Switched Digital International

SDN - Software Defined Network

SIP - Standard Installation Procedure

SME - Subject Matter Expert

SMOLTS - Single Mode Optical Loss Test Set

SMOP - Service Method of Procedure

SNEM - "SMOP Network Event Mechanization"

SPOC - Single Point of Contact

SSC - Service Support Center

SSNEM - Supplier SMOP Network Event Mechanization

SSTE - Signaling System Terminal Equipment

STP - Signal Transfer Point

SU - Software Updates

SYNC - Synchronization

TCC - Technology Control Center

TMAS - Transport Maintenance and Administration System

TMRS - Telecommunications Maintenance Radio System

TNC - Telemetry Network Controller

TOP - Task Oriented Procedure

TSC - Transport Service Center

TSCA - Toxic Substance Control Act

TSG - Technical Support Group

TSG - Trunk Subgroup

UCB1 - Universal Cabinet Box (type) 1

UCR - Usage, Conditioning, Routing

UCS - Universal Card Services

UPS - Uninterruptible Power Supply

USEC - Universal Services Echo Canceller

UTC - Universal Time Coordinate

WDM - Wave Division Multiplexing

12.2. DEFINITIONS

Term	Definition
Conflict ID	Conflict ID is a tool to help make better scheduling decisions while working multiple activities. The intention is not to Stop work, but rather make everyone aware of other work, so considerations can be made.
Conflict Resolution	Conflict Resolution is the act of making a determination based on your technical knowledge and any office specifics, as to whether or not the presented potential conflicts are actual conflicts.
Control Center	The responsible network maintenance module.
Critical Steps	Any step that presents a possibility for negative impact or service failure.
Green Step	A step that requires no OSWF coverage but does require Control Center notification.
Impact Level	**3= High 2=Medium 1=Low**
Network Events	A network event is defined as any planned work that has the potential to interrupt or degrade AT&T Customer service. Network Event activities are described, by technology in the Ask Yourself Handbook. A Network Event is assigned an identification number upon the approval of the SMOP.
Red Step	A step that requires coverage by the AT&T OSWF (based on combination of risk factor and potential customer impact.
Restricted Work Period	Work restrictions have been imposed by the Network Operations Center (NOC) Risk Management group for certain network activities on specific days throughout the year. To view the Restricted Work Day Schedule, along with the types of restrictions, internal users should visit the NOC web-site at http://noc.bm.att.com/noc/default.htm .
Risk Factor	Pertains to a work activity and its potential to negatively affect the Network.
	0=none 1=low 2=some 3=average 4=high 5=extreme
Safe Stopping Points	Points within the activity where work may be safely stopped for hours or days without putting the Network in danger.
Service Restoration	A contingency restoration plan is used to restore service and equipment in the event of a failure during implementation.
SMOP	**S**ervice **M**ethod Of **P**rocedure. A service method of procedure is a detailed document which describes a work methodology to line personnel who perform potential service affecting activity in NCS controlled locations.
S/NEM Service Method of Procedure/**N**etwork **E**vent **M**echanism	The S/NEM System provides an automated method for the GNFO/Supplier to create, submit for approval, retrieve, print, and store the SMOP forms.
Walk-through	A visual assessment at the actual location where the work is to be performed
Yellow Step	A step that requires notification of the appropriate technology-specific Control Center (see Section 1), but no GNFO coverage.

13. Contact List

Name	ATTUID	Phone #	Department / Responsibility
Sherry Bernasconi	sb3891	(908) 234-8939	Global Network Operations Center / Associate Technical Support Specialist

14. Revision Log

DATE	ISSUE	DESCRIPTION

Acronyms

A.1. Document Specific Acronyms

A.2. Acronyms Dictionary

Refer to ATT-000-000-020, Acronyms Dictionary.