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Maintenance

**DEVELOPING AND MAINTAINING
COMMUNICATIONS AND INFORMATION
SYSTEMS INSTALLATION RECORDS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air Force instruction (AFI) implements Air Force Policy Directive (AFPD) 21-4, *Engineering Data* and AFPD 33-1, *Command, Control, Communications, and Computer Systems (C4) Systems*, and provides direction for developing and maintaining communications and information systems installation records (CSIR). Refer questions, recommended changes, and conflicts between this and other instructions to Headquarters Air Force Communications Agency (HQ AFCA/ITPP), 203 West Losey Street, Room 1100, Scott AFB IL 62225-5222, using AF Form 847, **Recommendation for Change of Publication**. AFPD 21-4 and AFI 21-401, *Engineering Data Storage, Distribution, and Control*, assign responsibility to HQ 38th Engineering Installation Group (38 EIG) for operating the Engineering Data Service Center (EDSC) for communications and information systems. Address questions regarding the communications and information EDSC to the 38 EIG/TS, 4064 Hilltop Road, Suite 149, Tinker AFB OK 73145-2713. See **Attachment 1** for a glossary of references and supporting information.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

This revision changes “communications-computer systems (C-CS) installation records (CSIR)” to “communications and information systems installation records (CSIR). It changes references from the 38th Engineering Installation Wing to the 38th Engineering Installation Group (EIG). It specifically defines when installation records are required, and adds, deletes, and modifies some facility codes and titles. It places deleted facility codes in an inactive status and changes all references from command, control, communications and computer (C4) systems to communications and information systems. It also updates some terminology from communications-computer systems (C-CS) to communications and information systems. It defines the following terms: “civil engineer comprehensive plan/planning;” “command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) infrastructure planning (CIP) products;” “configuration control drawing;” “duplicate drawing;” “engineering drawing;” “geographic information system (GIS);” “master record;” “Neutral File Exchange Formats;” “raster graphics;” “reserved revisions;” “reference drawing;” “seed/prototype file;” and “vector graphics.” This revision

sion expands CSIR manager responsibilities when obtaining contractor-provided CSIRs, and adds the requirement for configuration control via reserved revisions. It addresses provisions for the Air Intelligence Agency (AIA) to provide additional guidance to meet unique mission and security requirements, but requires adherence to this instruction. It deletes the requirement for CSIRs to show stand-alone desktop systems, networked personal computers (PC), and other systems not integral parts of the infrastructure. It also updates the checklist questions located in [Attachment 5](#). A (I) preceding the publication title indicates a major revision from the previous edition.

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1. Definition and Purpose .

1.1. Definition. CSIRs are engineering drawings and specifications used for planning, programming, and supporting communications and information systems operations, maintenance, integration, and engineering and installation (EI) efforts.

1.2. Purpose. The purpose of CSIRs is to show what communications and information equipment, interconnecting cabling, and assigned circuitry are installed for a particular facility, building, or location. Accurate CSIRs support communications and information systems life-cycle management. These records assist communications and information systems engineers and planners at all levels to develop plans for growth, satisfy new requirements, complete communications and information system reviews, and eliminate unnecessary systems. These records are also an essential product for the development of CIP products. The communications and information planners and CSIR manager must make sure records are accurate and minimize duplication.

1.3. Communications and information systems include communications-electronic (C-E) systems as defined by Federal Standard (Fed-Std) 1037C, *Telecommunications: Glossary of Telecommunication Terms*, August 7, 1996.

2. Scope .

2.1. Systems That Require Installation Records. CSIRs are required for all Air Force-owned fixed communications and information systems, regardless of who maintains or operates the systems. CSIRs are also required for other communications and information systems that are integral parts of the base infrastructure or that connect or interface with the base communications and information systems infrastructure. Integral means essential to infrastructure restorable actions. These documentation requirements apply to permanent base communications and information systems infrastructures. These requirements also apply to infrastructures in a deployed environment when fixed communications and information systems are permanently installed or semi-permanent configurations are established for 180 days or more.

2.1.1. For land mobile radio systems, base stations, remote heads, and deployable equipment that complement the base infrastructure, identify key components only (i.e., trunking systems, base stations, antennas/couplings, and repeaters).

2.1.2. Permanently mounted transportable systems that are considered part of the base infrastructure.

2.1.3. Networked systems, including primary, secondary, and tertiary information transfer nodes/routers connected to the communications and information systems infrastructure (includes wireless systems); also key network equipment, fiber optic and copper cable routing and assignments and interfaces to metropolitan area networks (MAN) and wide area networks (WAN). Use separate records to document WANs and MANs as facilities.

2.1.4. Stand-alone desktop systems, networked PCs, and other systems not permanently mounted in fixed facilities or buildings, when drawings are necessary to support systems maintenance, but must document this requirement in a local instruction, supplement, or policy memorandum.

2.2. Systems That Do Not Require Installation Records. Air Force-owned systems mounted temporarily or temporarily installed in transportable shelters do not require CSIRs if the information specified in paragraph 1.2. is available in the system's technical publications.

2.2.1. This includes those systems used for formal training, as prototype systems, or for temporary exercise periods.

2.2.2. CSIRs are not required to identify stand-alone desktop systems, networked PCs, and other systems not permanently mounted in fixed facilities or buildings, when not integral parts of the infrastructure. **NOTE:** CSIR administrative and maintenance records, as defined in [Attachment 2](#), are still required.

2.3. Waivers. Organizations needing waivers to CSIR requirements must forward requests through major command (MAJCOM) channels (when applicable) to HQ USAF/SCXX, 1250 Air Force Pentagon, Room 5B315, Washington DC 20330-1250. Send an information copy to 38 EIG/TS and HQ AFCA/ITP.

2.4. Security. Personnel who develop and store CSIRs must:

2.4.1. Classify CSIR drawings for classified systems according to AFI 31-401, *Information Security Program Management*. In cases where information is not classified, protect it as FOR OFFICIAL USE ONLY (FOUO) in accordance with Department of Defense (DoD) Regulation 5400.7/Air Force Supplement (DoD 5400.7-R/AFSUP), *DoD Freedom of Information Act Program*, 22 July 1999.

2.4.2. Mark CSIRs with appropriate scientific and technical information (STINFO), distribution statement, and establish appropriate controls according to AFI 61-204, *Disseminating Scientific and Technical Information*.

2.5. Connections. CSIRs must show connections and interfaces that are important to restoring base communications and information systems to operational status. Cross-reference those connections and interfaces to communications and information systems restorable action plans for the affected base/site.

3. Responsibilities .

3.1. The 38 EIG/TS. The 38 EIG/TS provides guidance in maintaining CSIRs, data configuration management through reserved revisions, standard drawings, and operates the communications and information systems EDSC. All communications may be directed to: 38 EIG/TS, EDSC, 4064 Hilltop Road, Tinker AFB OK 73145-2713; DSN 884-7349; or electronic mail (E-mail): 38eig.draft@tinker.af.mil. Administers and maintains the EDSC database. The center:

3.1.1. Advises communications and information systems customers on the communications and information systems EDSC location and point of contact (POC).

3.1.2. Maintains a central data repository of CSIR information and prepares and distributes drawing records and master indexes to bases.

3.1.3. Prepares, updates, and manages current and accurate Air Force communications and information systems engineering drawings and specifications for CSIRs and standard drawings that detail the current equipment layout and interconnectivity.

3.1.4. Maintains CSIRs to support EI, operations and maintenance (O&M), and systems telecommunications engineering managers (STEM) architecture planning for Air Force communications and information systems.

3.1.5. Instructs communications and information systems EDSC customers on submitting and receiving CSIR updates.

3.1.6. Gives communications and information systems EDSC customers technical specifications for submitting digital drawing updates via electronic media. **NOTE:** These instructions include procedures and specifications needed to convert raster drawing to vector products.

3.1.7. Provides guidance and technical advice to base CSIR managers regarding digital file structures for C4ISR local contract development. Local contractors will be required to submit digital drawings in this format to facilitate integration of the data into the EDSC database.

3.1.8. Instructs 38 EIG agencies and EI units to notify the communications and information systems EDSC of discrepancies in CSIR information.

- 3.1.9. Stores, distributes, and controls communications and information systems technical documents such as blueprints, technical orders (TO), EI project packages, technical reports, and materiel catalogs.
 - 3.1.10. Manages data according to AFPD 61-2, *Management of Scientific and Technical Information*.
 - 3.1.11. Manages a DoD Index of Specifications and Standards (DODISS) documents library according to AFI 21-401.
 - 3.1.12. Maintains and disposes of records according to AFI 37-138, *Records Disposition--Procedures and Responsibilities* (will convert to AFMAN 33-322V3) and Air Force Manual (AFMAN) 37-139, *Records Disposition Schedule* (will convert to AFMAN 33-322V4).
 - 3.1.13. Performs quality assurance evaluator (QAE) responsibilities for the contract providing EDSC services and products.
 - 3.1.14. Provides a configuration control product to help unify related projects and avoid scheduling conflicts for project implementation actions. Posting reserved revisions of proposed projects to the CSIRs and maintaining a file of all approved installation drawings for reference purposes can satisfy this capability.
 - 3.1.15. Provides copies of approved installation drawings as part of drawing requests to support project planning.
- 3.2. Base Communications and Information Systems Officer (CSO). The base CSO provides technical support and advice on CSIRs and manages the update process. The base CSO:
- 3.2.1. Appoints a base CSIR manager.
 - 3.2.2. Notifies the communications and information systems EDSC of the name, office symbol, and telephone number of the CSIR manager.
 - 3.2.3. Serves as the base repository for CSIRs for all base organizations and supports off-base locations that do not have an assigned communications and information systems unit according to support agreements.
- 3.3. Base CSIR Manager:
- 3.3.1. Sets up and maintains a master CSIR file for on-base and geographically separated communications and information systems or facilities according to [Attachment 2](#). Uses the drawing number system explained in [Attachment 3](#) and the facility codes for CSIR drawings as listed in [Attachment 4](#).
 - 3.3.2. Serves as the focal point for receiving new drawings and processing data to update drawings.
 - 3.3.3. Makes sure the installation activity (contracted or military) or applicable workcenter provides accurate, updated drawing information.
 - 3.3.4. Provides CSIR management guidance and assistance to host base and tenant organizations.
 - 3.3.5. Develops CSIRs for all communications and information systems that are an integral part of the base infrastructure or connects/interfaces with the base communications and information systems infrastructure. These records must show connections and interfaces that impact the resto-

ration of communications and information (see paragraph 2. for more information). Ensure these connections and interfaces are provided to the appropriate agency responsible for communications and information systems restorable action plans.

3.3.6. Works with the contractor and contracting office to establish CSIRs or acceptable contractor-maintained records. Makes sure the communications and information systems EDSC receives contractor-provided CSIRs.

3.3.7. Makes sure all records are reviewed annually. This review should include determining the user's continued need (and continued funding) for the system, and, if so, verification of the record's accuracy. The annual review may also result in new requirements. **NOTE:** Cable records will follow guidance outlined in AFI 21-116, *Maintenance Management of Communications-Electronics*.

3.3.8. Maintains and disposes of records according to AFI 37-138 (will convert to AFMAN 33-322V3) and AFMAN 37-139 (will convert to AFMAN 33-322V4).

3.4. Base Civil Engineer. The base civil engineer uses CSIR data to facilitate comprehensive planning actions and to update comprehensive base or site plans. The communications and information systems EDSC, along with the base CSO, share their CSIRs with the base or site civil engineers. Likewise, the engineers share other communications drawings and real property records with the communications and information systems EDSC and base CSO.

3.4.1. Civil engineering design and construction managers include provisions for the development and delivery of "as-installed" CSIRs (including communications and information systems pre-wiring information) in construction and alteration projects. They:

3.4.1.1. Include interior dimensions, rack placement, duct placement, manhole orientation, and sump location for manholes.

3.4.1.2. Include number, size, configuration, usage, and type of ducts for duct banks.

3.4.1.3. Send one copy (preferably digital) of the records to the base CSO at the time of facility turnover. Ensure drawings meet the specifications of this instruction, to include criteria for EDSC electronic digital files (e.g., related neutral file exchange formatted files, related databases, raster formats for scanned products, and affected seed/prototype files).

3.5. Air Intelligence Agency (AIA). AIA will develop and maintain CSIRs for its facilities, controlled areas, and associated communications and information systems infrastructure, as outlined in this instruction (e.g., criteria, standardized terminology, updates, etc.). AIA may develop and publish additional guidance to address unique mission and security requirements.

4. Communications and Information Systems Contracts . The base CSO and CSIR manager:

4.1. Provide technical support and advice to the base contracting office on communications and information systems and construction contracts to make sure CSIRs are developed and maintained.

4.2. Make sure the contract specifies that the contractor must:

4.2.1. If contract is for installation purposes, use existing communications and information systems drawings, if available, to develop installation drawings; copies of which will be sent to the EDSC upon final approval. If contract is for maintenance purposes, transfer accurate copies of all

CSIRs (currently with system certification of transfer of maintenance responsibilities) to the CSIR manager or another contractor.

4.2.2. Provide accurate paper and electronic updates insuring they are in MicroStation format. No other format is compatible with the EDSC database.

4.2.3. Revise existing drawings that are not in an Air Force format when making changes to communications and information systems.

4.2.4. Provide all drawings according to AFI 21-402, *Engineering Drawing System*.

4.3. Make sure communications and information systems maintenance contracts include a provision for the contractor to provide periodic updates, as changes are made, to the CSIR manager.

4.4. Prepare, update, and transfer contractor-maintained records according to this instruction.

5. Changes to Communications and Information Systems Installation Records. Changes may result from installation, modification, relocation, or removal of systems by a military service EI team, a contractor, or local unit. Changes are also noted during the annual review of records. The installation activity, or workcenter in the case of the annual review, provides one copy of updated drawings or records (called “interim installation records [IIR]”) to the CSIR manager. The CSIR manager makes sure the communications and information systems EDSC receives a copy. See AFI 33-104, *Base-Level Planning and Implementation*, for more information about installations, modifications, relocations and removals.

5.1. CSIR Managers:

5.1.1. Make sure drawings use standard color codes for changes: yellow for deleted data; red for additions; and blue for instructions to drafters, engineers, and others. **NOTE:** Use red to document notes/instructions that must remain on the corrected/updated drawings.

5.1.2. Make sure the appropriate implementation activity provides two copies of the updated drawings. Keep one copy in the master CSIR file and send the other copy to the communications and information systems EDSC for updating. Include a cover letter with the drawings sent to the communications and information systems EDSC. Submit changes promptly, preferably as they occur.

5.1.3. Get the current drawing record index from the communications and information systems EDSC and verify its accuracy.

5.1.4. Notify the communications and information systems EDSC, in writing, of major self-help installations that will affect CSIRs or future engineering efforts. Submit revised as-installed drawings to the communications and information systems EDSC. Use an Air Force (AF) Form 1146, **Engineering Change Request/Authorization**, to request changes to current or planned installations. When the change involves drawings, include the CSIR drawings with the form. **NOTE:** CSIR managers do not sign the AF Form 1261, **Communications and Information Systems Acceptance Certificate**, or the Department of Defense (DD) Form 250, **Material Inspection and Receiving Report**, for acceptance of installed, modified, removed, or relocated installations, until the installation activity has provided accurate annotated interim records.

6. Management Checklist . To help you better manage the taskings imposed by this publication, you may use the questions at [Attachment 5](#) and AF Form 2519, **All-Purpose Checklist**.

GARY A. AMBROSE, Brig Gen, USAF
Acting Director, Communications and Information

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DoD 5400.7-R/AFSUP, *DoD Freedom of Information Act Program*, 22 July 1999

FedStd 1037C, *Telecommunications: Glossary of Telecommunication Terms*, August 7, 1996

JP 1-02, *DoD Dictionary of Military and Associated Terms*, as amended through 24 January 2000

AFPD 21-4, *Engineering Data*

AFI 21-116, *Maintenance Management of Communications-Electronics*

AFI 21-401, *Engineering Data Storage, Distribution, and Control*

AFI 21-402, *Engineering Drawing System*

AFI 31-401, *Information Security Program Management*

AFI 33-104, *Base-Level Planning and Implementation*

AFI 37-138, *Records Disposition--Procedures and Responsibilities* (will convert to AFMAN 33-322V3)

AFMAN 37-139, *Records Disposition Schedule* (will convert to AFMAN 33-322V4)

AFPD 61-2, *Management of Scientific and Technical Information*

AFI 61-204, *Disseminating Scientific and Technical Information*

Abbreviations and Acronyms

AF—Air Force (used on forms only)

AFCA—Air Force Communications Agency

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

AIA—Air Intelligence Agency

ANG—Air National Guard

AWC—Aerospace Warning/Weapons Control

C4—Command, Control, Communications, and Computer

C4ISR—Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance

C-CS—Communications-Computer Systems

CADD—Computer-Aided Drawing and Design

CCTV—Closed-Circuit Television

C-E—Communications-Electronics

CIP—Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance Infrastructure Planning

CSIR—Communications and Information Systems Installation Record

CSO—Communications and Information Systems Officer

DD—Department of Defense (used on forms only)

DISA—Defense Information Systems Agency

DoD—Department of Defense

DODISS—Department of Defense Index of Specifications and Standards

DXF—Drawing Exchange Format

EDSC—Engineering Data Service Center

EI—Engineering and Installation

EIG—Engineering Installation Group

E-mail—Electronic Mail

EMSEC—Emission Security

FOUO—FOR OFFICIAL USE ONLY

GEOLOC—Geographic Location Indicator

GIS—Geographic Information Systems

HQ—Headquarters

IGES—Initial Graphics Exchange Specification

IIR—Interim Installation Record

JP—Joint Publication

JTA-AF—Joint Technical Architecture-Air Force

LAN—Local Area Network

MAJCOM—Major Command

MAN—Metropolitan Area Network

NATO—North Atlantic Treaty Organization

NAVAIDS—Navigational Aids

O&M—Operations and Maintenance

PC—Personal Computer

POC—Point of Contact

QAE—Quality Assurance Evaluator

STEM—Systems Telecommunications Engineering Manager

STINFO—Scientific and Technical Information

TO—Technical Order

WAN—Wide Area Network

Terms

Communications and Information Systems—Integrated systems of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control across the range of military operations. Also called “C4 systems.” Also called “communications and computer systems.”

Command, Control, Communications, Computer, Intelligence, Surveil—lance, and Reconnaissance (C4ISR) Infrastructure Planning Products (CIP) Products provided by the communications and information blueprinting process. They include the blueprint, an information repository, road map, investment plan, work plan, Air Force master work plan, supporting documents (statement of objectives, statement of work, reports, etc.), and implementation plans. Once matured the blueprint, as a document, will transition into the remaining products, existing as a digital entity. The term “CIP” products replaces and is synonymous with term “blueprint.”

Communications and Information Systems Officer (CSO)—The term CSO identifies the supporting communications and information systems officer at all levels. At base level, the base CSO is the commander of the communications unit responsible for carrying out base communications and information systems responsibilities. Tenant organizations may also have CSOs. At MAJCOM, and other activities responsible for large quantities of communications and information assets, it is the person designated by the commander as responsible for overall management of communications and information assets budgeted and funded by the MAJCOM or activity. The CSO function, when under the base communications unit, uses the office symbol “SC” that expands to three and four digits to identify specific functional areas.

Communications and Information Systems Installation Records (CSIR)—Manager Person designated by the base CSO to manage the communications and information systems installation records.

Comprehensive Plan—The combination of the *General Plan, Component Plans, Special Plans and Studies, and Maps* that document a wide range of information necessary for decision-making. It encompasses those specific resource documents and processes determined to be essential for planning and managing an installation's physical assets in support of the mission. The comprehensive plan is the all-encompassing description of the products, whereas comprehensive planning is the action associated with the process and implementation.

Comprehensive Planning—Ongoing civil engineering process, iterative, participatory process addressing the full range of issues affecting or affected by an installation's development. Through this process, goals and objectives are defined, issues are identified, information is gathered, alternative solutions are developed, and a sound decision-making process is employed to select a preferred alternative for implementation. It incorporates Air Force programs such as operational, environmental, urban planning, and others to identify and assess development alternatives and ensure compliance with applicable Federal, state, and local laws, regulations, and policies.

Computer System—A functional unit, consisting of one or more computers and associated software, that

uses common storage for all or part of a program and also for all or part of the data necessary for execution of the program; executes user-written or user-designated programs; performs user-designated data manipulation; and executes programs that modify themselves during the execution.

Duplicate Records—Duplicate records are field copies of the master record. They consist of interim installation records, engineering drawings, and reference drawings.

Engineering Data List—Engineering data lists contain manufacturing specifications and drawings, technical orders (TO), and data from other Air Force sources. These documents aid technicians and operators regarding a particular system or piece of equipment. Normally, these documents are kept with CSIRs.

Engineering Data Service Center (EDSC)—A central repository of engineering drawings and other engineering data. EDSC receives, indexes, reproduces, stores, distributes, and controls data as authorized in AFPD 21-4 and AFI 21-401.

Engineering Project Drawing—Drawings which depict new engineering (approved proposals yet to be installed). These drawings, in conjunction with standard drawings, are used by communications and information systems installers (organic and contractors) to install equipment and systems.

Facility Code—An alphanumeric code that denotes the type of facility associated with communications and information systems or equipment. The “A” code identifies a general facility type, while the “B” code depicts a single communications and information type.

Geographic Information System (GIS)—GIS technology is more complex than computer-aided drawing and design (CADD) technology because it must accurately store both graphic (map or drawing) and non-graphic (database or attribute) data in a database for analysis and display purposes. GIS technology can be used to simulate extremely complex real-world events and situations.

Infrastructure—1. (DoD, NATO) A term generally applicable to all fixed and permanent installations, fabrications, or facilities for the support and control of military forces. (See also: “bilateral infrastructure,” “common infrastructure,” and “national infrastructure.”) 2. (JP 1-02) The common-user portion of the base-level communications and information systems environment. It includes transmission, switching, processing, system-control and network-management systems, equipment, and facilities that support the base. Examples include the base telephone switch and cable plant, base communications center, and local area networks (LAN).

Integration—The merger, whenever feasible, of the functional and technical characteristics of existing and planned communications and information to make sure the resulting overall system is consistent with the Air Force communications and information systems architecture. To be consistent the systems must be interoperable; void of conflicts in purpose, schedule, and technology; and effectively and efficiently supportive of the Air Force.

Interim Installation Records (IIR)—Annotated copies of project drawings compiled by the EI team chief, contractors, or O&M units not yet posted to the master record. When the EI team prepares IIRs to document the completion or installation of a communications and information systems project at a particular location, these IIRs are commonly called “as installed” drawings and annotated to reflect the as-installed conditions that vary from the actual project drawings furnished to the team chief by the communications and information systems EDSC (when the communications and information systems EDSC has provided project drawings). When the project is completed, the team chief annotates two sets of drawings, normally leaving one set with the CSIR manager, and forwarding the other set to the

communications and information systems EDSC. The CSIR manager makes sure the communications and information systems EDSC receive "as installed drawings." IIRs are usually derived from CSIRs.

Local Area Network (LAN)—A telecommunications system, within a specified geographical area, designed to allow a number of independent devices to communicate with each other over a common transmission topology. LANs are usually restricted to relatively small geographical areas (i.e., rooms, buildings, or clusters of buildings) and utilize fairly high data rates. Depending on the implementation, these communications networks can provide internal interchange of voice, data, graphics, video, or other forms of electronic messaging.

Major Command (MAJCOM) Architecture—A framework or formulation of mission-oriented communications and information systems elements, both functional and technical, that interrelate to support a command's war-fighting capability and other command-unique missions. These elements apply the system design guidance of technical architectures and the information-flow guidance of functional architectures (i.e., logistics, command and control, etc.) to the command mission requirements.

Master Record—A drawing depicting the as-installed configurations of existing communications and information facilities at a specific site or base. Master records will only show information of pertinent value to the long-term maintenance of equipment and systems. Future activity will be indicated by the addition of single-line reserved revisions. The master record will be maintained by the EDSC.

Network—1. An organization of stations capable of intercommunication but not necessarily on the same channel. 2. Two or more inter-related circuits. 3. A combination of switches, terminals, and circuits that serve a given purpose. 4. A combination of terminals and circuits in which transmission facilities interconnect the user stations directly (that is, there are no switching, control, or processing centers). 5. A combination of circuits and terminals serviced by a single switching or processing center.

Neutral File Exchange Formats—Computer-aided drawing and design (CADD) graphic files copied into neutral file exchange formats such as drawing exchange format (DXF) and initial graphics exchange specification (IGES) can be read by both AutoCad and MicroStations. Caution must be exercised because the neutral file exchange formats may not transfer all of the graphical entities, or the data needed for analysis and further review. Basic CADD software packages and add-on or third party CADD software application packages are typically employed to develop CADD drawings. None of the neutral file exchange formats currently available have reliable mechanisms to transfer the wide variety of non-graphical linkage mechanisms used in basic and advanced CADD software packages.

Raster Graphics—Raster graphics or bit-mapped graphics are digital graphics stored as arrays of pixels for display and modification. In raster data, there are no lines, circles, or polygons; only pixels that are grouped to give the appearance of these elements. In order to possess properties that can be used by a CADD system to perform analyses, raster graphics must be converted to vector graphics. Raster graphics are commonly created in one of two ways: (a) use of "paint" type computer graphics programs (e.g., desktop publishing, image editing, and paint) to draw and edit images; (b) quick captures by optically scanning the image of existing hard copy drawings and converting it to a digital format (bit-mapped). Once captured digitally, the drawings can be archived, distributed, or converted to a vector format. Either scanning equipment or digital cameras can accomplish the scanning.

Reference Drawing—Drawing copies requested by a customer for reference purposes only.

Reserved Revision—Revision posted to the master record that indicates future project work and will contain the project number, if applicable, and engineering design activity (e.g., 738 EIS, ANG, or contractor). Reserved revisions, with copies of applicable future project work, can be used to research

and coordinate project implementation actions.

Seed/Prototype Files—Whenever a new graphics file is created, a seed/prototype file should first be identified as a template. Seed/prototype files contain preset settings (e.g., units, color tables, line weights/thickness, level/layer structure, line styles/types, origin, text, etc.) and view configurations, but no elements.

Self-Help Project—A communications and information requirement satisfied by the local communications and information unit with the use of available base resources (i.e., manpower, material, technical expertise, etc.), including contractual services. The 38 EIG sometimes supports engineering and provides sources to procure installation materiel. Installation is self-help. Document infrastructure changes to infrastructure according to this instruction.

Systems Telecommunications Engineering Manager (STEM)—An individual or individuals within the 38 EIG responsible for developing, recommending, and coordinating implementation of base-level target architectures and transition strategies consistent with Air Force and MAJCOM communications and information systems architectures. The STEM-Bs develop CIP products using the blueprinting process for the base-level communications and information systems; the STEM-Cs provide consultant services and develop planning documents for an entire MAJCOM.

Target Architecture—An architecture that provides a base-wide digital information transfer system allowing connectivity between all users on the base and connectivity between users and long-haul services such as government and commercial services.

Vector Graphics—Vector elements are graphical objects that have a precise direction, length, and shape. The vector graphical objects can be points, lines, polygons, arcs, rectangles, circles, splines, text, ellipses, elliptical arcs, arc wedges, elliptical arc wedges, and symbols. Grouped vector objects are either in the form of graphic groups or complex elements such as cells or blocks. Vector graphics are particularly well suited for processes where drawing development and modification are heavy and true two and three-dimensional accuracy is required. Vector can exist in two- or three-dimensional design environments and are created using CADD basic and advanced software packages. In addition, the ability to deal with geometric elements as unique entities provides a powerful linkage for images to be grouped with non-graphical data attributes. Output from CADD software packages creates a proprietary binary data file that has limited portability across various platforms and vendor packages, unless it is converted into initial graphics exchange specification (IGES) or other neutral data format.

Attachment 2

ORGANIZING COMMUNICATIONS AND INFORMATION SYSTEMS INSTALLATION RECORDS FILES

A2.1. Purpose . This attachment details what to place in CSIR files and how to organize them.

A2.2. Organization . Limit CSIRs for each facility to the essential documentation and drawings for effective life-cycle management of communications and information systems. Organize files as follows:

A2.2.1. Part 1, Administrative Records. These records provide a history and audit trail for each facility. The base CSO keeps these documents for the duration of a facility. Each facility's administrative records will include:

A2.2.1.1. Programming, approval, and authorization documents.

A2.2.1.2. Implementation, completion, and acceptance documents and attachments.

A2.2.1.3. Test certifications and special test results such as horizon profiles; photographs; screen angle charts; line of-site charts; electromagnetic radiation, interference and compatibility; and x-ray and radiation hazards. **NOTE:** Maintain these documents only if needed to support maintenance actions or configuration management actions.

A2.2.2. Part 2, Drawing Records. These records depict physical layout of communications and information systems and provide engineering data. The most current drawing is accurately maintained for the duration of the facility. Report CSIR errors to the base CSIR manager. File documents for each facility or system separately and in the following order, front to back:

A2.2.2.1. Drawing Record Index. Lists of drawing records that pertain to a particular base, site, or facility.

A2.2.2.2. Engineering Data Lists. Documents such as manufacturer specifications and drawings, technical orders, and data from other Air Force sources.

A2.2.2.3. Key Sheets. Drawing records that pertain to each facility. File by facility or building number.

A2.2.2.4. Building and Base Layout Drawings. Drawings depicting the physical location of communications and information systems. The CSIR manager, in conjunction with maintenance workcenters, determines specific use of key sheets.

A2.2.2.5. Communications and Information System Drawings. Drawings depicting vital systems engineering data unique to a particular location, site, or facility. **NOTE:** If drawings are too large to file with other records, use a cross-reference sheet to show where they are located.

A2.2.3. Part 3, Maintenance Records. Normally filed in a maintenance workcenter so maintenance personnel have current data available for updating. Records may include the following:

A2.2.3.1. Air Force Technical Order (AFTO) Forms: AFTO Form 95, **Significant Historical Data**; AFTO Form 121, **Telephone Equipment Line Record**; AFTO Form 122, **Key Telephone Equipment Installation Record/Worksheet**; AFTO Form 224, **Cable Record (Left Tab 1-20)**; AFTO Form 224A **Cable Record (Right Tab 21-51 and 51-70)**; AFTO Form 224B, **Cable**

Record (Left Tab 71-00 and 01-20); AFTO Form 376, **Circuit Layout Record/Trouble Report;** and core automated maintenance system automated history printouts.

A2.2.3.2. Standard drawings (non-CSIR) from the 38 EIG often provide the only source of schematic and parts breakdown information on interconnecting cables, wiring, equipment-rack construction, and command-supported ancillary equipment items. They may contain engineering data lists that should be identified as manufacturer specifications and drawings or data from other Air Force sources. These include manufacturer's drawings of installed commercial equipment.

A2.3. Drawing Numbers . Use the drawing number system explained in [Attachment 3](#) for CSIR drawings. The communications and information systems EDSC assign these numbers.

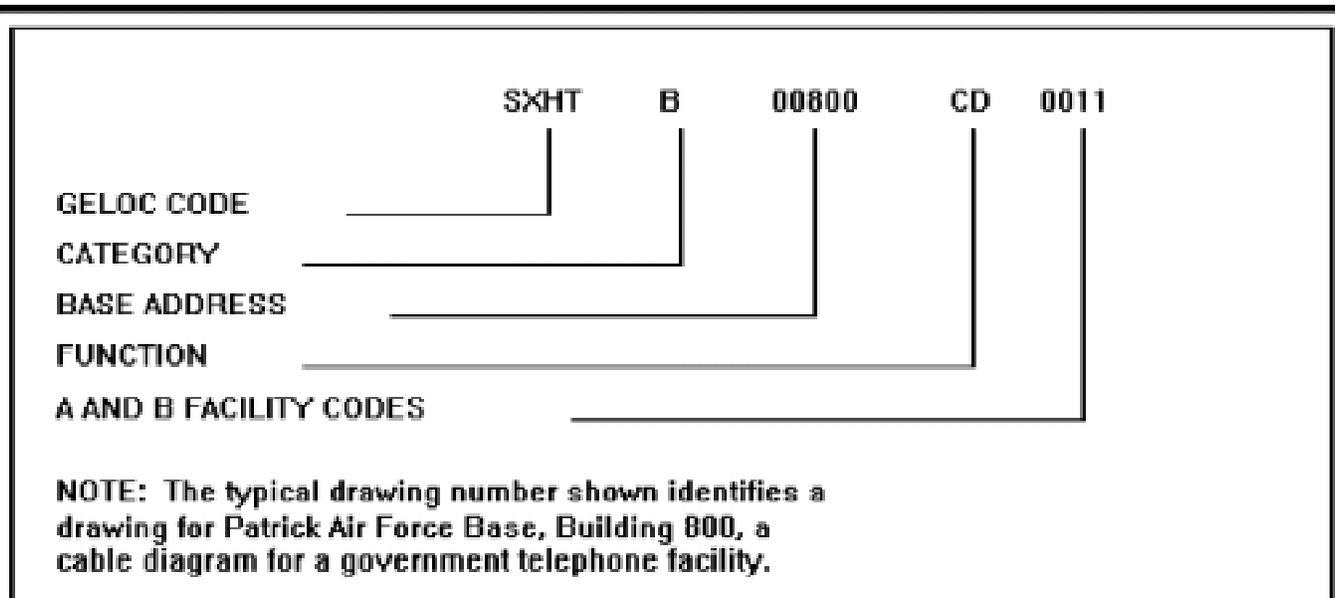
Attachment 3

DRAWING NUMBER SYSTEM

A3.1. Air Force Code Identification Block . This block of each engineering drawing identifies the manufacturer or government organization that produced the drawing. These codes are available in the Defense Supply Agency Handbook, *Federal Supply System Codes of Manufacturers* (H4-1 and 2).

A3.2. Drawing Number System . **Figure A3.1.** illustrates a typical drawing number. The communications and information systems EDSC assigns numbers to each drawing according to the following descriptions:

Figure A3.1. Drawing Number Example.



A3.2.1. Geographic Location Indicator (GEOLOC). The first element of an engineering drawing is the GEOLOC code. It denotes the precise location of the installation to which the drawing applies. When an engineering drawing pertains to more than one installation, use the GEOLOC of the organization that prepared the design.

A3.2.2. Category. The second element categorizes the drawing record by its application. There are six categories:

A3.2.2.1. Standard Drawings-S. Drawings that depict communications and information systems engineering data applicable to more than one system, facility, equipment, or installation method. They are distinct from site-adaptation data.

A3.2.2.2. Planning Drawings-P. Drawings that depict preliminary engineering data to identify operational and programming requirements for engineering a communication and information facility or system. Prepare these drawings to support programming documents and project- support agreements.

A3.2.2.3. **Transportable System Drawings-T.** Drawings that depict communications and information systems engineering design data specifically applicable to a transportable or mobile system or facility.

A3.2.2.4. **Grid Drawings-G.** Drawings that depict the portions of communications and information facilities and systems located outside buildings.

A3.2.2.5. **Building Drawings-B.** Drawings that depict the portions of communications and information facilities and systems physically located within specific buildings.

A3.2.2.6. **Mixed Drawings-M.** Drawings that depict the portions of communications and information facilities and systems located both inside and outside buildings.

A3.2.3. **Base Address or Serial Number.** A five-digit serial number directly related to the category element and derived as follows:

A3.2.3.1. **Standard Drawings or Transportable System Drawings (Categories S and T).** A five-digit serial number assigned by the communications and information EDSC.

A3.2.3.2. **Building Drawings (Category B).** The building number assigned by the base or site civil engineer, preceded by sufficient zeros to total five digits. Do not use alpha characters assigned as part of the building number by civil engineers (e.g., building 160A would appear as 00160 in the drawing number).

A3.2.3.3. **Grid Drawings (Category G).** The specific grid location of communications and information facilities outside buildings. The communications and information EDSC places a grid system on a base layout map, which is the source of the grid number. The first two digits identify the horizontal row and the last three digits identify the vertical row containing the specific grid. The communications and information systems EDSC may subdivide the basic grid to show detail in appropriate scale when required. The drawing will identify the location of major communications and information system facilities using Category B facility codes. Identify pertinent drawings by referencing the facility key sheet.

A3.2.3.4. **Mixed Drawings (Category M).** The serial number will usually be 00000, but may reflect the number of the primary building depicted on the drawing.

A3.2.3.5. **Planning Drawings (Category P).** Determine the serial number by content, according to the guidelines for Categories S, T, B, M, and G drawings.

A3.2.4. **Function.** Classifies a drawing according to its predominant type of graphic illustration or information. The communications and information system EDSC establishes function identifiers.

A3.2.5. **Facility Codes (FAC).** These codes (listed in [Attachment 4](#)) denote the type of facility associated with the communications and computer systems or equipment. Do not use general facility codes (2000, 3000, 6000, etc.) when a specific code applies. When facility codes do not apply, enter N000. The first facility code entry must be a numeric or alpha G, N, or M. Entries two through four must be numeric. Use FAC M000 when more than one code applies. When a drawing depicts a single communications and information system facility, use the appropriate B FAC. When a drawing depicts more than one communications and information system facility, use 0000.

Attachment 4
FACILITY CODES

Section A4A—General Categories of Facilities

A4.1. Facility Codes . The 38 EIG/TS maintains facility codes. Send address requests for code changes to 38 EIG/TS, 4064 Hilltop Road, Suite 149, Tinker AFB OK 73145-2713.

A4.2. A Codes .

A4.2.1. 0XXX--Base Cable Plant . Includes off-base and on-base, government-owned and commercial, base communications and information systems transmission and distribution, and telephone systems that are part of the overall base switchboard and switching facilities and station equipment. The category also includes weather transmission and distribution facilities 0018 and 0028. It excludes transmission and distribution facilities used in direct support of missile countdown and launch control.

A4.2.2. 1XXX--Aerospace Warning/Weapons Control (AWC) Facilities . AWC pertains to the worldwide aerospace defense environment. This category includes air and space defense warning or weapon-control facilities, plus supporting intra and inter-command communications, special meteorological facilities, tactical telephone systems, and closed-circuit television (CCTV) systems. It excludes non-AWC base wire and telephone, intra-base radio, security-type CCTV, navigational aids (NAVAIDS), base general-purpose meteorological systems, and inter-command communications and information systems.

A4.2.3. 2XXX--NAVAIDS, Meteorological Facilities, and Flight Facilities . Air Force Weather Agency manages the 227X-series. Air Force Flight Standards Agency manages all other 2000-series. This category includes navigation assistance, air traffic control, and meteorological facilities.

A4.2.4. 3XXX--Common Long-Haul Communications Systems . Includes Defense Information Systems Agency (DISA) operations and related activities. Examples include Defense Information Infrastructure but exclude dedicated long-haul command and control systems specifically assigned to MAJCOMs.

A4.2.5. 4XXX--Other Inter-command Systems . Includes inter-command dedicated communications and information systems used by tenants on Air Force installations that are not part of common-user communications and information systems or host-command dedicated communications and information systems. The category excludes networks that are functional components of AIA/C-CS 9000-series systems. An example is the Defense Switched Network (DSN). The category excludes dedicated long-haul command and control systems or host-command dedicated communications and computer systems.

A4.2.6. 5XXX--Weather Communications . Includes facilities used for transportation and reception of weather information (e.g., radios, data terminals, satellite ground stations, facsimile, communications security, CCTV, etc.). Code weather television briefing facilities as 5062. The category excludes meteorological facilities and weather-satellite tracking stations.

A4.2.7. 6XXX--Base-Level Communications and Information Systems . Includes all dedicated base or intra-site communications and information systems facilities supporting the host mission,

including base level and regional data processing centers. It excludes tactical (deployable) equipment.

A4.2.8. 7XXX--Training Facilities . Includes all communications and information systems facilities installed and maintained as complete end items at formal training centers for O&M training. Examples of such centers are at Keesler and Sheppard AFBs. Also programmed in this category are fixed communications and information systems requirements for Air Reserve centers and Air Reserve flying centers. The category excludes communications and information systems facilities at formal training centers supporting base communications.

A4.2.9. 8XXX--Aerospace Communications and Information Facilities (Operational).

Includes ground communications and information systems facilities associated with arresting, launching, directing, controlling, and guiding ballistic missiles, earth satellites, space vehicles, and space air vehicles.

A4.2.10. 9XXX--Special Projects . Includes AIA communications and information facilities, certain research and development facilities, and facilities not fitting the criteria of other "A" codes.

A4.2.11. GXXX--Air National Guard (ANG) Facilities . Includes ground communications and information facilities that support the ANG.

Section A4B—Specific Categories of Facilities

A4.3. B Codes .

Code	Description
000	Multi-Facility Drawing
011	Government Telephone System
012	Government Fire Reporting System
013	Government Crash Reporting System
014	Government Security System
015	Government Auxiliary and Satellite System
016	Government Aerospace Telephone System
017	Government Electronic Telephone System
018	Government Weather Wire System
021	Commercial Telephone System
025	Commercial Auxiliary and Satellite System
026	Joint Chiefs of Staff Alert Network/Command Post Alert Network
062	Government Closed Circuit TV Facility (CCTV)
078	Integrated Program Air Base Defense
081	Commercial Recording Terminal
091	Situation Display Device

100	Early Warning Station
104	Air Defense Control Center
105	Air Defense Air/Ground Communications
106	Special Radar Facilities
111	Ballistic Missile Tracking Facility
162	VHF/UHF Intercept
165	Ground Telemetry
168	Communications Data Management System
170	Combat Data Processing Facility
172	Radar Course Directing Group
178	Automated Control Center
201	Control Tower
202	Runway Supervisory Unit
203	Control Tower w/Approach Control
204	Air Traffic Control Air/Ground Equipment
207	Special Aircraft Control
209	Flight Following Center
211	Tactical Control
213	Pilot-To-Forecaster Facility
214	Pilot-To-Dispatcher Facility
220	Permanent Radar Approach System
221	Mobile Radar Approach System
226	Instrument Landing System Facility
238	VORTAC Facility
242	VHF Omni-range
243	TACAN Facility
245	75 Megahertz Fan Marker
247	LF/MF Lo/Med Power Radar Beacon
248	Low Power LF Homing Beacon
270	Area Storm Detection Radar
271	Local Storm Detection Radar
273	Meteorological Solar Burst Predict

274	Surface Wing Measuring Facility
275	Surface Temperature and Humidity Measuring Facility
277	Cloud Base Height Measuring Facility
278	Horizontal Visibility Measuring Facility
279	Dual Runway Instrument Measuring Facility
280	Weather Satellite Receiver
281	Barometry
282	Automatic Meteorological Station
283	Automated Weather Distribution (AWDS)
367	Automated Communications Terminal - Small
369	Command Post Record Facility
376	Data Terminal Station-Government Owned
380	DSN Switching Facility
381	Government DSN Four-Wire Terminal
382	Commercial DSN Four-Wire Terminal
384	Command and Control Data Processing Facility
385	Space-Ground Link Subsystem
387	Satellite Command/Control Data Process
408	Supervisor of Flying Facility
409	LF Receiver-Only Terminal
410	Radio TT Weather Intercept
411	Radio Control Wave Weather Intercept Station
412	Radio Facsimile Weather Intercept Station
419	Radio Voice HF G/A Medium Power
421	Radio TT HF Multiplex Medium Power
423	Radio TT HF Duplex Medium Power
428	Radio Voice HF Low Power
429	Radio Voice Medium Power
444	Radio Voice VHF G/A Medium Power
445	Radio Voice VHF G/A Low Power
447	Radio Voice UHF G/A Low Power
448	Radio Voice UHF G/A High Power

449	Radio Voice UHF G/A Medium Power
451	Microwave Terminal Facility
452	Microwave Relay Facility
453	Microwave Relay w/Dropout
454	Fiber Optics Equipment System
455	Video Teleconference
460	Voice Frequency VHF Radio Link System
461	Voice Frequency VHF Terminal Station
462	Voice Frequency VHF Relay Station
465	Voice Frequency Submarine Cable Terminal
470	Long Lines System
475	Land Line Telephone Carrier Terminal
476	Land Line Telegraph Carrier Terminal
477	Wire-Facsimile Facility
478	Voice Frequency Submarine Cable System
500	CRYPTO Supporting Networks and Local Area Networks (LANS)
502	On-Line Digital Cryptologic Duplex Synchro
503	On-Line Digital Cryptologic H/D Non-Synchro
504	Off-Line Literal Cryptologic
505	On-Line Multipurpose Cryptologic
506	On-Line Digital Cryptologic Broadcast
508	On-Line High Speed Digital Cryptologic
509	On-Line Cryptologic Speech (Ciphony)
511	On-Line TT Cryptologic Half Duplex Synchro
512	AUTODIN Cryptologic Switching Center
520	G/A Cryptologic Speech (Ciphony)
602	SSB Ratio TT HF High Power Terminal
603	SSB Voice HF Medium Power G/A
604	SSB Voice HF Power G/A
640	Satellite Terminal facility (Multi Channel)
650	Patch and Test Facility
652	Channel and Technical Control Facility

653	Inter-site Facility
655	Receiver Station Auxiliary Equipment
656	Communications Center Auxiliary Equipment
658	Radio Monitor Facility
659	Cryptologic Monitor Facility
680	SSB Voice HF Low Power G/A
681	SSB Voice HF Medium Power G/A
684	SSB Radio TT HF High Power G/A
685	SSB Voice HF Low Power Terminal
690	Mobile SSB HF Low Power
691	Mobile SSB HF Med Power
693	MARS Mobile Emergency Communications Staff
697	AFRT Television
698	AFRT Radio
699	MARS Facility
808	Remote Communications Center
812	Digital Data Transfer System Sub A
820	Building/Floor Network Equipment Room
825	Government LAN - Broadband
826	Government LAN - Baseband
828	Government LAN - Fiber Optics
830	Government LAN - Twisted Pair
831	Commercial LAN - Broadband
832	Commercial LAN - Baseband
834	Commercial LAN - Fiber Optics
836	Commercial LAN - Twisted Pair
998	Undefinitized Facility
999	Prepositioned Communications and Computer Equipment

Section A4C— Inactive Facility Codes

A4.4. The following facilities are removed from use. Contact the communications and information system EDSC for further guidance.

Code	Description
019	Solar Station Un-interruptible Power System
022	Commercial Fire Reporting System
023	Commercial Crash Reporting System
024	Commercial Security System
027	Commercial Electronic System
028	Commercial Handwriting Communications Facility
063	Commercial Closed Circuit TV (CCTV)
071	Government Recording Terminal
077	Local Area Security Radar
101	Early Warning/ Ground Control Intercept Station
102	Ground Control Intercept Station
103	Master Ground Control Intercept Station
109	Missile Tracking
110	Ballistic Missile Detection Facility
112	Missile Guidance Facility
115	Ballistics Missile Impact Predictor
117	Ballistics Missile Radar Control and Processing
121	Non Fixed BMS Communications Complex
122	Missile Instrument UHF Timing Terminal
123	Master Data Recovery Timing
124	Slave Data Recovery Timing
125	Rx Time RCVY/Data WF W/MCD
133	Fixed Ballistics Missile System Quality Control
141	Automatic COC Data Processing
160	Passive Detection
161	HF Intercept
163	Ground Electronic Countermeasures
164	Frequency Con, Anal/Freq Mon Intf Con
171	Combat Data Transmission Facility
180	Air Weapon Control Long-Range Radar Facility
181	Air Weapon Control Reporting Post

182	Air Weapon Control System and Reporting Post
183	Air Weapon Control and Reporting Center
184	Air Weapon Control Combat and Operations Center
186	Air Weapon Control G/A Voice Link
188	Air Weapon Control Non-fix Data Link
189	Air Weapon Control Non-fix Voice Link
210	En route Air Traffic Control Center
212	Transport Control
215	Airways Aeronautical Facility
227	Microwave Landing System (MLS)
239	UHF Homing Beacon
244	Radar Beacon
246	High Power LF Homing Beacon
263	Non fixed TACAN
264	Tactical LORAN C/D Facility
272	Atmosphere Locating Facility
290	HF/DF Balloon Tracking
297	Horizontal/Vertical Wind Measuring Facility
356	Commercial Automated Communications Terminal Remote
357	Commercial Automated Term Small
358	Commercial Automated Communications Terminal Medium
359	Commercial Automated Communications Terminal Large
364	Remote Automated Terminal
365	Automated Communications Terminal Large
366	Automated Communications Terminal Medium
368	Emergency Message Automated Transmission USAF OT
371	TT Terminal Radio Teletype
372	TT Weather Terminal Radio TT
373	Facsimile Weather Radio Facility
374	Automatic Data Switching Center
375	Manual Data Relay Center
377	Commercial Data Terminal Station

379	Automatic Error Detection and Control
510	Cryptologic Relay Center
513	Status Authentication System Cryptologic
514	Command Security System
515	Low Speed Telemetry Security System
516	IFF and Data Link Security
517	High Speed Telemetry Security System
518	Airborne Digital Cryptologic
519	Airborne Cryptologic Speech (Ciphony)
521	G/A Cryptologic Digital
590	COMSEC Floating Spares
591	AFCD Maintenance Standards & Spare
601	SSB Radio TT HF Medium Power Terminal
605	SSB Voice HF High Power Terminal
614	Radio FAX HF Weather Broadcast Fe M Power
622	Radio TT LF Multiplex High Power
628	LF High Power Transmitter 7 Receiving Terminal
651	RF Co-Auxiliary Switch Facility, Transmitter Site
654	Transmitter Station Auxiliary Equipment
660	VHF Ionospheric Forward Scatter
664	Tropospheric Scatter Radio Terminal
665	Tropospheric Scatter Radio Relay
666	Tropospheric Scatter Radio w/Dropout
670	G/A/G Digital Comm Terminal
671	Non Fixed LOS O/H Medium Power Facility
700	Mobile NAVIDS and Commercial Facility
800	STRATCOM Communications System Auxiliary Equipment
801	Data Transfer Terminal
805	Data Display Center
806	Data Processing Center
809	Electronic Local Data Communications Center
810	Simplex Remote Command Control

- 811 Digital Data Transfer System Sub A
- 817 Post Attack Command Center Transmission Center

Attachment 5**QUESTIONS FOR DEVELOPING A COMMUNICATIONS AND INFORMATION SYSTEMS INSTALLATION RECORD MANAGEMENT CHECKLIST****A5.1. General .**

A5.1.1. Are CSIRs developed and maintained for all Air Force-owned fixed communications and information systems regardless of who maintains or operates the system? (Paragraph 2.1.)

A5.1.2. Are CSIRs developed for communications and information systems that are integral parts of the base infrastructure or connect or interface with the base communications and information infrastructure? (Paragraph 2.1.)

A5.1.3. Are CSIRs developed for land mobile radio systems, base stations, remote heads, and deployable equipment that complement the base infrastructure? (Paragraph 2.1.1.)

A5.1.4. Are CSIRs developed for permanently mounted transportable systems that are considered part of the base infrastructure? (Paragraph 2.1.2.)

A5.1.5. Are CSIRs, both classified and those that are FOUO, properly stored and protected? (Paragraph 2.4.)

A5.1.6. Do installation activities and workcenters provide updated information (interim installation records) to the CSIR manager and communications and information system EDSC? (Paragraph 5.)

A5.1.7. Are CSIRs maintained and disposed of according to AFI 37-138 (to convert to AFMAN 33-322V3) and AFMAN 37-139 (to convert to AFMAN 33-322V4)?

A5.2. Major Command .

A5.2.1. Has the MAJCOM reviewed waiver requests from CSIR requirements? (Paragraph 2.3.)

A5.3. The 38 Engineering Installation Group .

A5.3.1. Has the communications and information systems EDSC advised customers on their location and POC? (Paragraph 3.1.1.)

A5.3.2. Has the communications and information systems EDSC instructed customers on submitting and receiving CSIR updates? (Paragraph 3.1.5.)

A5.3.3. Has the communications and information systems EDSC provided customers with technical specifications for submitting digital drawing updates via electronic media? (Paragraph 3.1.6.)

A5.3.4. Does the communications and information systems EDSC administer the contract provided services, performing QAE responsibilities? (Paragraph 3.4.1.3.)

A5.3.5. Does the communications and information systems EDSC ensure the contractor provides configuration control by maintaining reserved revisions and information copies of approved future project work?

A5.3.6. Does the communications and information systems EDSC ensure the EDSC infrastructure is compliant with Joint Technical Architecture-Air Force (JTA-AF) and tri-service standards for CADD and GIS? **NOTE:** Modernization plans will ensure the greatest degree of interoperability.

A5.4. Base Communications and Information Systems Office .

A5.4.1. Has the CSO appointed a CSIR manager? (Paragraph 3.2.1.)

A5.4.2. Has the CSO advised the communications and information systems EDSC who the CSIR manager is? (Paragraph 3.2.2.)

A5.4.3. Does the CSO support off-base locations that do not have an assigned communications and information systems unit? (Paragraph 3.2.3.)

A5.4.4. Does the CSO provide technical support and advice to the base contracting office on communications and information systems contracts to make sure CSIRs are developed or maintained? (Paragraph 4.1.)

A5.4.5. Does the CSO ensure contractor-provided CSIRs are developed from EDSC drawings?

A5.4.6. Does the CSO ensure copies of drawings depicting approved future contractor work are provided to the EDSC?

A5.4.7. If applicable, does the CSO ensure contractor-provided electronic digital products are provided in compatible delivery and media formats?

A5.4.8. Does the CSO ensure contractor-provided scanning deliverables are delivered in an EDSC compatible raster format?

A5.5. Communications and Information Systems Installation Record Manager .

A5.5.1. Does the CSIR manager make sure contracted and military installation activities, or the applicable workcenter, provide accurate, updated, drawing information? (Paragraph 3.3.3.)

A5.5.2. Does the CSIR manager provide management guidance and assistance to base and tenant organizations? (Paragraph 3.3.4.)

A5.5.3. Does the CSIR manager set up and maintain a master CSIR file for on- and off-base systems or facilities? (Paragraph 3.3.1.)

A5.5.4. Does the CSIR manager work with contractors and the contracting office to establish CSIRs or acceptable contractor-maintained records? (Paragraph 3.3.6.)

A5.5.5. Does the CSIR manager make sure the communications and information systems EDSC receives contractor provided CSIRs? (Paragraph 3.3.6.)

A5.5.6. Does the CSIR manager make sure all records are reviewed annually? (Paragraph 3.3.7.)

A5.5.7. Does the CSIR manager maintain and dispose of CSIRs according to AFI 37-138 (will convert to AFMAN 33-322V3) and AFMAN 37-139 (will convert to AFMAN 33-322V4)? (Paragraph 3.3.8.)

A5.5.8. Does the CSIR manager make sure the communications and information systems EDSC receive CSIR changes provided by the installation activity and workcenter? (Paragraph 5.)

A5.5.9. Does the CSIR manager provide technical support to the base contracting office on communications and information systems contracts to make sure CSIRs are developed or maintained? (Paragraph 5.1.) **NOTE:** The CSIR manager will ensure contractor uses the EDSC copy of the drawing to develop and update CSIRs.

A5.5.10. Does the CSIR manager revise existing contractor-prepared drawings that are not in an Air Force format only when the contractor makes communications and information systems changes? (Paragraph 4.2.3.)

A5.5.11. Does the CSIR manager make sure all future contractor-provided drawings conform to Air Force formats unless the communications and information systems EDSC directs otherwise? (Paragraph 4.2.4.)

A5.5.12. Does the CSIR manager make sure communications and information systems maintenance contracts include a provision for the contractor to provide periodic updates, as changes are made, to the CSIR manager. (Paragraph 4.3.) *NOTE:* The CSIR manager will make sure the contract provides EDSC-compatible electronic digital CSIRs and related files and related databases, and raster formats for scanned CSIRs.

A5.5.13. Does the CSIR manager prepare, update, and transfer contractor maintained records according to AFI 21-404? (Paragraph 4.4.)

A5.5.14. Does the CSIR manager update drawings using standard color codes for drawing changes? (Paragraph 5.1.1.)

A5.5.15. Does the CSIR manager make sure the appropriate activity provides two copies of the updated drawings? (Paragraph 5.1.2.)

A5.5.16. Does the CSIR manager get the current drawing record index from the communications and information systems EDSC and verify its accuracy? (Paragraph 5.1.3.)

A5.5.17. Does the CSIR manager notify the communications and information systems EDSC in writing of major self-help installations that will affect CSIRs or future engineering efforts? (Paragraph 5.1.4.)

A5.6. Base Civil Engineer .

A5.6.1. Does the civil engineer include provisions for the development and delivery of “as installed” communications and information systems records in construction and alteration projects? (Paragraph 3.4.1.)

A5.6.2. Does civil engineer design and construction managers send one copy of “as installed” communications and information systems records to the base CSO and one copy to the communications and information systems EDSC at the time of facility turnover? (Paragraph 3.4.1.3.)