



U.S. Department of Justice
Federal Bureau of Prisons

PROGRAM STATEMENT

OPI: FPI/MKT

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Product Design Control, FPI

/s/

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1. PURPOSE AND SCOPE

To establish procedures for managing design integrity for products Federal Prison Industries (FPI) manufactures. This is done by controlling engineering drawings and specifications, the primary means by which the FPI engineering conveys ideas and requirements to entities within and outside the organization.

FPI manufactures products in compliance with military, commercial, contractor, customer, and internally generated designs, specifications, and standards.

New product development within FPI must be in accord with this PS and the Program Statement **Product Development, FPI**.

a. Summary of Changes

Policy Rescinded

P8264.02 Product Design Control (6/25/01)

- Industry standards have been changed and updated.
- References to ISO 9001: 2008 have been included.
- References to SYMIX production software have been changed to reflect Millennium software.
- References to Program Management have been changed to reflect the new Business Unit organizational structure.

- References to the Quality Assurance Program Statement have been updated to reflect the most recent Program Statement **Quality Program Manual**.

b. **Program Objectives.** The expected results of this program are:

- a. Unauthorized design modifications will be prevented.
- b. Design integrity for FPI products, particularly those manufactured at several locations, will be maintained.
- c. A single, consistent method for changing product designs will be used.
- d. One central repository for documents that define FPI products will be defined.

2. DEFINITIONS

a. **Acronyms and Abbreviations:**

- CAD Manager – Senior manager for the Computer-Aided Drafting (CAD) operation at FCI Englewood, CO.
- DCN – Document Change Notice.
- DCR – Document Change Request.

b. **Contract.** A legally binding relationship obligating the seller to furnish supplies or services (including construction) and the buyer to pay for them.

c. **Contracting Activity.** Government activity having a legal agreement or order with an individual, partnership, company, association, or other entity for the design, development, manufacture, maintenance, modification, or supply of items or services.

d. **Contractor.** An individual, partnership, company, corporation, or other service having a contract with the Government for the design, development, manufacture, maintenance, modification, or supply of items under a contract.

e. **Copy.** Reproduction or duplication, in any media, of an original.

f. **Customer-Generated Design.** A product design initiated by a customer. The product design's control rests with the customer, as does responsibility for maintaining engineering documents.

g. **Design Activity.** An activity responsible for the design of an item. It may be a Government, commercial, or nonprofit organization. (ASME Y14.24M)

h. **Drawing (Engineering).** An engineering document or digital data file(s) that discloses (directly or by reference), by means of graphic or text presentations (or both), an item's physical and functional requirements. In combination with other engineering documents, drawings provide the information to manufacture an item.

i. **Drawing Format.** The arrangement and organization of information within a drawing. This includes the size and arrangement of blocks, notes, lists, revision information, and the use of optional or supplemental blocks.

j. **Drawing List.** A dated item-by-item record of drawings that make up a product or series of products, including the most current revisions.

k. **Engineering Data.** Engineering documents such as drawings, associated lists, accompanying documents, manufacturer specifications and standards, or other information prepared by a design activity and relating to the design, manufacture, procurement, test, or inspection of items.

l. **Item.** A non-specific term for any unit or product, including materials, parts, assemblies, and accessories.

m. **Manufacturer.** An individual, company, corporation, firm, or Government activity, or component thereof, that:

- Controls production of an item.
- Produces an item from crude or fabricated materials.
- Assembles material or components, with or without modification, into more complex items.

n. **Millennium.** A computerized Enterprise Resource Planning system FPI uses to plan, manage, and control its manufacturing and business operations. Also, the electronic database that stores information for items FPI manufactures.

o. **Original.** The design activity's full-size reproducible drawings or digital data file(s) on which are kept the revision record recognized as official.

p. **Product.** An item manufactured from crude or fabricated materials or assembled from material or components with or without modification.

q. **Requesting Official.** An individual who requests an internal design activity or a procurement or contracting action to conduct product design or development.

r. **Revision.** A record of changes or modifications to a product design reflected in its drawings and specifications.

s. **Schedule of Products.** A record of all products offered by the manufacturer; i.e., FPI.

3. RESPONSIBILITIES

The design for a particular product or series of products may be delegated to a factory or contractor with the approval of the appropriate General Manager.

Control of the design remains with the General Manager. The CAD Manager has responsibility for maintaining the drawings.

For designs provided by a contractor, the requesting official requires the contractor to provide drawings and other engineering data to the CAD Manager **after** design approval but **before** adding the product(s) to the FPI Schedule of Products. Drawings the contractor provides must contain all information necessary to manufacture, inspect, and test the product(s).

a. The **CAD Manager** must:

- Manage and control documents related to the design of FPI-manufactured products.
- Maintain engineering drawings and specifications for FPI-manufactured products.
- Maintain a list of factories authorized to use computer-aided design and drafting software.
- Ensure that the latest releases of product drawings (excluding Accumark patterns) are maintained on the FPI intranet.
- Provide copies of the latest approved drawings and drawing lists to field locations, product support staff, business unit staff, and contractors.
- Maintain original drawings for products currently manufactured by FPI.
- Maintain archival records of drawings for products formerly manufactured by FPI, for not less than five years.
- Issue guidance concerning the current release of computer-aided design and drafting software for use by staff and inmates.
- Pilot-test revisions and upgrades of computer-aided design and drafting software before field implementation.
- Develop, in cooperation with MISB, security settings for inmate use of computer-aided design and drafting software before field implementation.
- Ensure that electronic drawing files are not released to factories, vendors/contractors, or Business Groups without written authorization from the CAD Manager, unless they are in “read only” format.

b. Each **General Manager** must ensure that:

- Requests for new product designs/developments or major redesigns are forwarded to the CAD Manager.
- Contractors who provide designs for FPI products provide engineering data to the CAD Manager **after** design approval but **before** adding the product(s) to the FPI Schedule of Products. The contractor’s drawings must contain all information necessary to manufacture, inspect, and test the product(s). For items the contractor specifies as proprietary, the

contractor must provide drawings and specifications sufficient for inspecting and testing the items.

- Contractors do not change any product design without written approval from the General Manager.
- Factory locations are authorized to use computer-aided design and drafting software.
- Copies of the latest approved specifications and standards are provided to field locations, product support staff, business unit staff, and contractors for products in their areas.

c. Each **Associate Warden (Industries)/Superintendent of Industries** must:

- Ensure that products at his/her location are manufactured to the latest approved designs, specifications, and standards.
- Establish an internal document control system for drawings, specifications, work/assembly instructions, special process instructions, inspection instructions, test procedures, and quality manuals and policies per the Program Statement **Quality Program Manual** and local ISO 9001: 2008 processes.
- Provide original or revised drawings of locally- or contractor-developed products manufactured at his/her location that have not previously been submitted to the CAD Manager. When drawings do not exist for these products, provide sample(s) of the product(s) sufficient for the CAD Manager to create them.
- Submit DCRs to the CAD Manager.
- Ensure that computer-aided design and drafting software at his/her location is authorized by the General Manager.
- Ensure that inmate users of computer-aided design and drafting software have security implemented per MISB guidance.
- Ensure that staff responsible for computer-aided design and drafting software are trained in hardware/software use, security, and data backup.

d. The **Factory Manager** at each field location must:

- Maintain control of drawings, specifications, work/assembly instructions, and special process instructions.
- Ensure that product drawings, specifications, and standards used to manufacture products are current.

e. The **Quality Manager** at each field location must:

- Maintain control of inspection instructions, test procedures, and quality manuals and policies.
- Monitor inspections to ensure that only the latest drawings, specifications, and standards are used.
- Periodically audit the local document control system using guidelines in the Program Statement **Quality Program Manual**, Section 17, and local ISO 9001: 2008 processes.
- Require correction and prevention of findings noted in an audit.

- Ensure that **Quality Program Manual**, Section 17, and local ISO 9001: 2008 processes reflect design document control and maintenance by the CAD Manager.

4. DESIGN STANDARDS

- a. **Drawing Standard.** ASME Y14.100 governs FPI's engineering drawings.
- b. **Digital Hardware Standard.** The minimum system requirements for the authorized version of AutoCAD, as published by Autodesk. Minimum system requirements for the Accumark pattern design software used by Clothing and Textiles is published by Gerber Scientific.
- c. **Digital Software Standard.** AutoCAD is the only approved product for computer-aided design and drafting with the exception of the Accumark system used by Clothing and Textiles for pattern design. The approved release is determined by the CAD Manager and sent to Central Office and field locations.

5. DRAWING CONTROLS

- a. **Drawing Numbering Scheme.** The CAD Manager issues drawing numbers for new products FPI manufactures. Drawing numbers consist of:
 - Three-character alphanumeric prefix designating product line.
 - Two-digit number indicating fiscal year during which drawing number was assigned.
 - Three-digit sequential number with alphabetic revision code.
- b. **Document Control System.** Each field location must establish an internal document control system per the Program Statement **Quality Program Manual** and local ISO 9001: 2008 processes, to ensure that products at that location meet the latest designs, specifications, and standards unless otherwise specified by the customer.

When new production orders are released in the **Millennium** system, the Factory Manager ensures that drawings, specifications, and standards used to manufacture the item match the current "Revision" code for that item. If not, the Factory Manager requests the latest documentation from the CAD Manager.

- c. **Existing Products.** The Drafting Department maintains current drawings for FPI products. Original drawings at field locations are forwarded to the CAD Manager for maintenance, in accordance with the Program Statement **Quality Program Manual**, Section 17, and ISO 9001: 2008 document control, and archiving.

This does not apply to customer-generated products for which the customer controls the product design and maintains engineering documents.

6. DESIGN CHANGES

No change to any FPI-manufactured product may be made without the CAD Manager's written approval by DCN or Engineering Bulletin.

A DCR must be submitted to the CAD Manager to change any document related to a product's design, including engineering drawings and item specifications. The CAD Manager:

- Logs each request.
- Assigns it a tracking number.
- Forwards it to the product support group for review and disposition.

Upon completing document revisions, the CAD Manager creates a DCN or an Engineering Bulletin explaining design change(s) that must accompany copies of the document(s) to field locations and business groups.

REFERENCES

Program Statements

P8053.02 Engineering Bulletin, FPI (2/28/97)
P8260.03 Product Development, FPI (2/17/2012)
P8340.07 Quality Program Manual (1/14/00)

Standards Referenced

a. American Society of Mechanical Engineers (ASME)

Y14.24M Types and Applications of Engineering Drawings
Y14.100 Engineering Drawing Practices

b. International Organization for Standardization (ISO)

ISO 9001: 2008 Quality Management System

c. American Correctional Association (ACA) Standards

None.

Records Retention Requirements

Guidance for retaining records and information that apply to this Program Statement is available in the Records and Information Disposition Schedule (RIDS) system on Sallyport.