



Space Requirements

Handbook AS-504

July 1999

A. Purpose. This handbook provides rules and guidelines for developing the various types and sizes of facilities found in the Postal Service. It also provides templates of the equipment to be housed in those facilities.

B. Contents. This handbook replaces Handbook AS-504, *Space Requirements*, August 1995. Major changes are discussed here. The upper limit in size of small standard buildings is being increased from 6,500 square feet to 9,000. This necessitates changes in the matrixes for determining building size, parking requirements, and the overall site sizes; therefore, the computerized Facility Planning Concept has been revised. Forms 919 and 929 have also been revised to reflect changes.

The retail modules (service counters), the administrative modules, Inspection Service offices, and the space requirements for support areas less a medical unit have been changed. The section on machinable letters and flats has been modified to include the delivery barcode sorter/optical character reader (DBCS/OCR) and the flat sorting machine model 1000 (FSM-1000) as well.

Templates have been added to Chapter 4 for the DBCS/OCR, FSM-1000, straight-line small parcel and bundle sorters with the Siemens and the Lockheed Martin feed systems, four blocks of space for universal sorters (5000, 10000, 15000, and 20000 square feet), pedestal and gantry robots, sleeves and strap equipment, and mechanized scan-where-you-band equipment. The carrier loading vestibule (section 52) has been reduced to 400 square feet. In Chapter 6, text and layouts for the image processing unit rooms at the remote encoding center sites have been changed to reflect current practices and procedures.

C. Revisions. This handbook will be revised as new methods are developed that affect space requirements and/or as new equipment is added.

D. Distribution

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E. Comments. Direct any questions through channels to:

SYSTEMS/PROCESS INTEGRATION
ENGINEERING
UNITED STATES POSTAL SERVICE
8403 LEE HIGHWAY
MERRIFIELD VA 22082-8146

F. Effective Date. This material is effective immediately upon receipt.



William J. Dowling
Vice President
Engineering



4 Workstation Units for Mail Processing

41 General

Chapter 4 provides space requirement drawings of workstation unit (WSU) layouts for visual reference. These WSUs are provided for mail processing operations, including mail preparation; distribution of letter and flat mail; distribution of irregular parcels and pieces (IPPs); processing special category mail; distribution of parcel post; bulk sorting and materials handling operations; computer forwarding system (CFS) operations; and office and clerical operations. Section 33 instructs the analyst to use these WSUs in the assembly of the work space requirements for a mail processing facility. All WSUs are designed with current postal equipment. WSUs may have to be adjusted for future obsolete equipment. Exhibit 41 lists equipment that is referenced by Postal Service identification number (PSIN) within certain WSUs.

42 Mail Preparation

Exhibit 42a lists the WSUs, and square feet (sq ft) required, currently used for mail preparation. Exhibits 42b through 42ah illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 41
Equipment Referenced in WSUs

| PSIN (Item Number) | Description |
|-----------------------------------|---|
| 3B | Dumping and Facing Table |
| 8B | Canceling Machine Table |
| 11 | Dumping and Stamping Case and Table |
| 30 | Pouch Rack |
| 31A | Pouch Rack (No Bottom) |
| 31B | Pouch Rack |
| 32 | Parcel Post Sack Rack |
| 53 | Adjustable Platform Stool |
| 61A,B | Sack Racks |
| 77 | Swinging Letter Case Wing |
| 78 | Swinging Letter Case Wing (Closed Back) |
| 79 | Letter Case and Table |
| 80 | Letter Case and Table (Closed Back) |
| 109B | Flat Case and Table |
| 124C | Carrier Case and Table |
| 136B | Flat Case |
| 144C | Carrier Case and Table Wing |
| 0857 | Automatic Indicating Scale |
| 1033 | Small Canvas Hamper |
| 1046 | Large Canvas Hamper |
| 1070 | Nutting Truck |
| 1075 | Utility Cart (U-Cart) |
| 1226C | Tray Cart |
| 1226F | Tray Cart (Delivery Barcode Sorter (DBCS)) |
| 1922A | Model 89 Conveyor 17' |
| 1922B | Model 89 Conveyor 25' |
| 1938 | Gravity Roller Conveyor |
| 3601 | Canceling Machine, Medium Volume |
| 3602 | Canceling Machine, Large Volume |
| 3909 | General-Purpose Mail Container |
| 3910 | Bulk Mail Container (BMC), Over-the-Road (OTR) Container |
| 3919 | Wood Pallet, 40" x 48" |
| 3919A | Particle Board Pallet, 40" x 48" |
| 3919B | Plastic Pallet, 40" x 48" |
| 3921 | Eastern Region Mail Container |

Exhibit 42a

WSUs Used for Mail Preparation

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Item Numbers and/or Description |
|-------------------|-------------------------------|-----------------------------|--|
| 420001 | 420001.DWG | 87 | 36-Separation Canceling Workstation Without Cancel Machine |
| 420001a | 420001A.DWG | 101 | 36-Separation Canceling Workstation With Cancel Machine |
| 420002 | 420002.DWG | 142 | 49-Separation Canceling Workstation With Cancel Machine |
| 420002a | 420002A.DWG | 231 | 77-Separation Canceling Workstation With Cancel Machine |
| 420003 | 420003.DWG | 68 | Canceling Workstation With #3B Table Without Cancel Machine |
| 420003b | 420003b.DWG | 110 | Canceling Workstation With #3B Table With Cancel Machine |
| 420006 | 420006.DWG | 527 | 1/2 Mark Canceler With Culling and Facing Conveyor (10-Ft Work Area) |
| 420006a | 420006A.DWG | 680 | 1/2 Mark Canceler With Culling and Facing Conveyor (18-Ft Work Area) |
| 420007 | 420007.DWG | 918 | 1/2 Mark Canceler With Tandem Culling and Facing Conveyor (28-Ft Work Area) |
| 420008 | 420008.DWG | 2,023 | Micro Mark II Facer Canceler System With Culling Belt and Meter Mail Setup |
| 420008a | 420008A.DWG | 1,184 | Micro Mark II Facer Canceler System With Culling Belt |
| 420008b | 420008b.DWG | 821 | Micro Mark II Facer Canceler Systems for Advanced Facer-Canceler System (AFCS) Thicks |
| 420009 | 420009.DWG | 4,516 | Two Micro Mark II Facer Canceler Systems With Tandem Culling Belt and Tandem Meter Mail Setup |
| 420009a | 420009A.DWG | 3,745 | Two Micro Mark II Facer Canceler Systems With Tandem Culling Belt |
| 420010a | 420010A.DWG | 2,294 | Advanced Facer Canceler System With Culling Belt |
| 420010b | 420010B.DWG | 7,300 | Two AFCSs With Standard Cull/Feed System |
| 420010c | 420010C.DWG | 8,262 | Three AFCSs With Standard Cull/Feed System |
| 420010d | 420010D.DWG | 9,126 | Four AFCSs With Standard Cull/Feed System |
| 420010e | 420010E.DWG | 10,876 | Five AFCSs With Standard Cull/Feed System |
| 420010f | 420010F.DWG | 11,740 | Six AFCSs With Standard Cull/Feed System |
| 420010g | 420010G.DWG | 11,836 | Seven AFCSs With Standard Cull/Feed System |
| 420010h | 420010H.DWG | 12,700 | Eight AFCSs With Standard Cull/Feed System |
| 420011 | 420011.DWG | 700 | Tandem Meter Mail Setup |
| 420012 | 420012.DWG | 648 | Five-Position Meter Mail Setup |
| 420012a | 420012A.DWG | 495 | Three-Position Meter Mail Setup |
| 420013 | 420013.DWG | 260 | Storage and Cutting |
| 420014 | 420014.DWG | 970 | Pouch Opening With 63 Separations |
| 420014a | 420014A.DWG | 444 | Pouch Opening With 48 Separations |
| 420015 | 420015.DWG | 1,000 | Sack Opening, Paper, and Small Parcels and Rolls (SPRs) — Primary Cutting and Setup (58 Separations) |
| 420016a | 420016A.DWG | 950 | SPR and Thicks Canceling (17-Ft Belt) |
| 420016b | 420016B.DWG | 1,175 | SPR and Thicks Canceling (25-Ft Belt) |
| 420017a | 420017A.DWG | 950 | Model 15 Flats Canceler/Stacker (17-Ft Belt) |
| 420017b | 420017B.DWG | 1,175 | Model 15 Flats Canceler/Stacker (25-Ft Belt) |

Exhibit 42b
420001, 36-Separation Canceling Workstation Without Cancel Machine

Date: Dec. 1994
 Mail Preparation
 Scale: No Scale
 Area: 87 Sq Ft

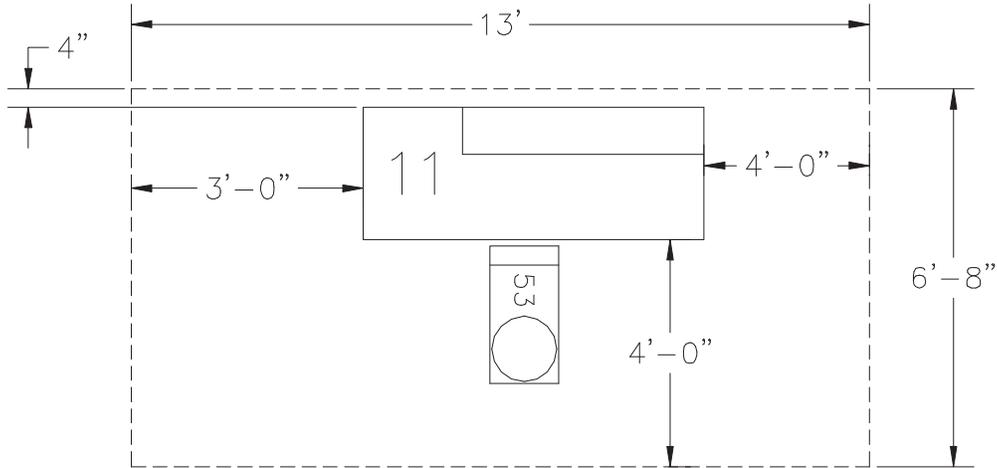


Exhibit 42c
420001a, 36-Separation Canceling Workstation With Cancel Machine

Date: Dec. 1994
 Mail Preparation
 Scale: No Scale
 Area: 101 Sq Ft

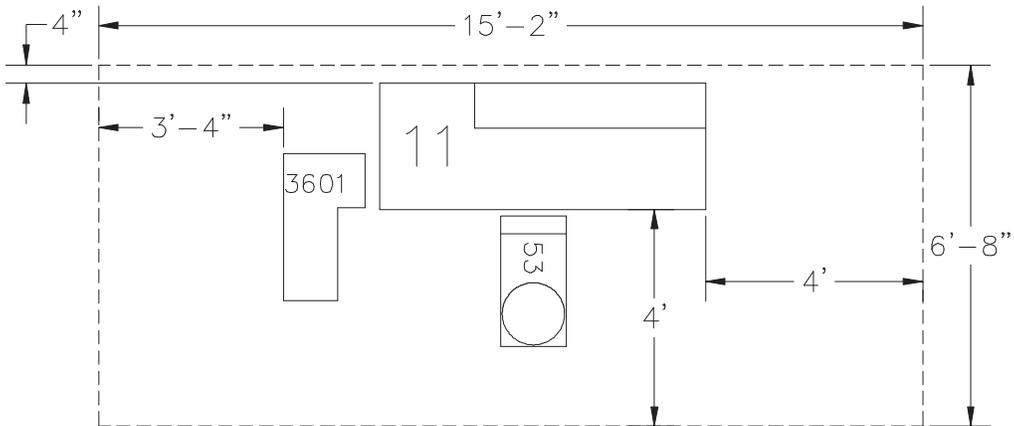


Exhibit 42d
420002, 49-Separation Canceling Workstation With Cancel Machine

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 142 Sq Ft

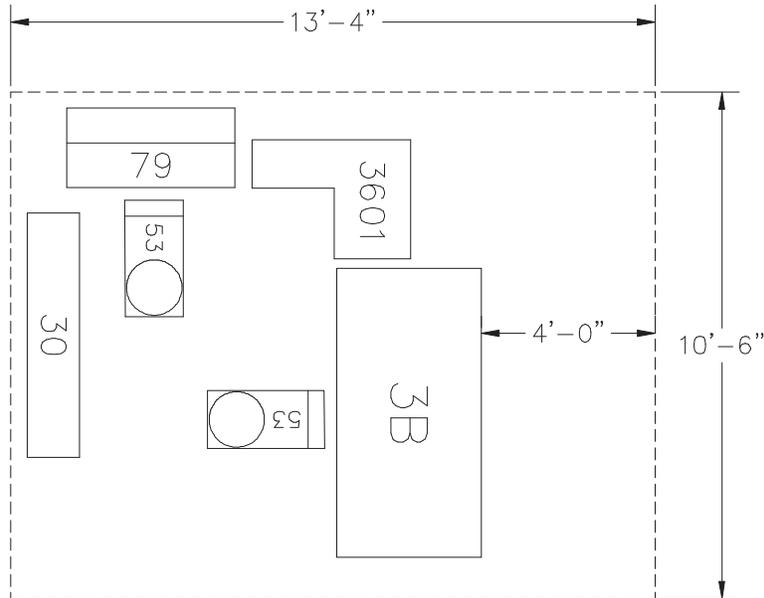


Exhibit 42e
420002a, 77-Separation Canceling Workstation With Cancel Machine

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 231 Sq Ft

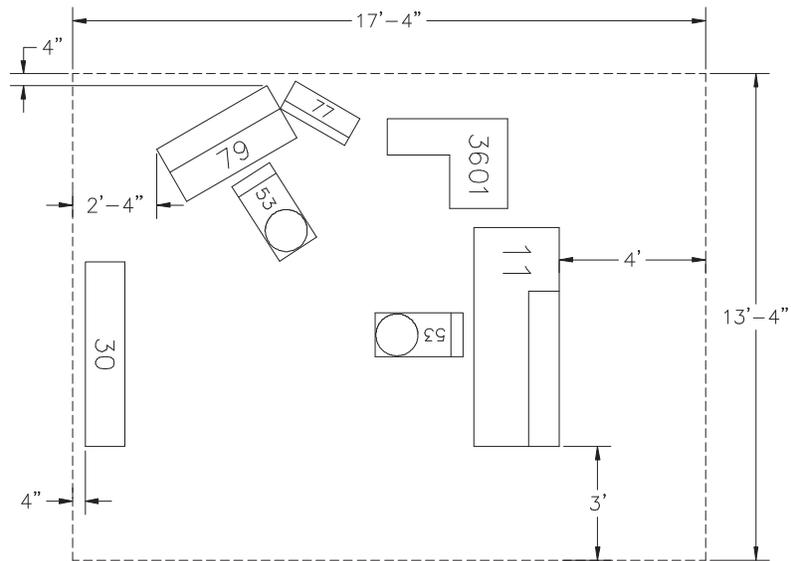


Exhibit 42f
420003, Canceling Workstation With #3B Table Without Cancel Machine

Date: Dec. 1994
 Mail Preparation
 Scale: No Scale
 Area: 68 Sq Ft

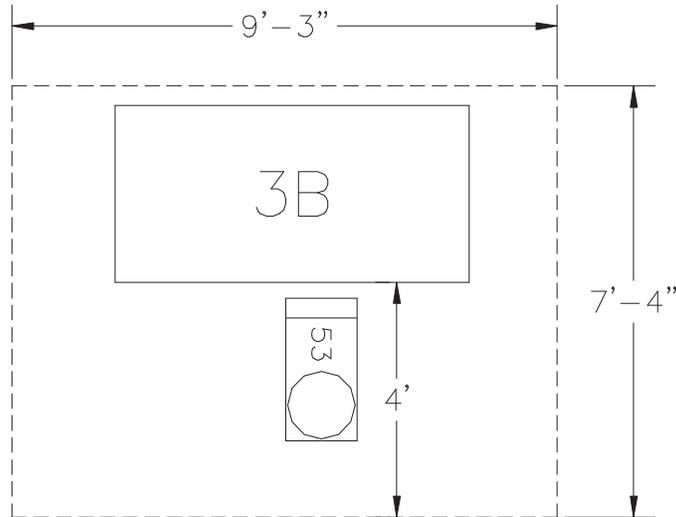


Exhibit 42g
420003b, Canceling Workstation With #3B Table With Cancel Machine

Date: Dec. 1994
 Mail Preparation
 Scale: No Scale
 Area: 110 Sq Ft

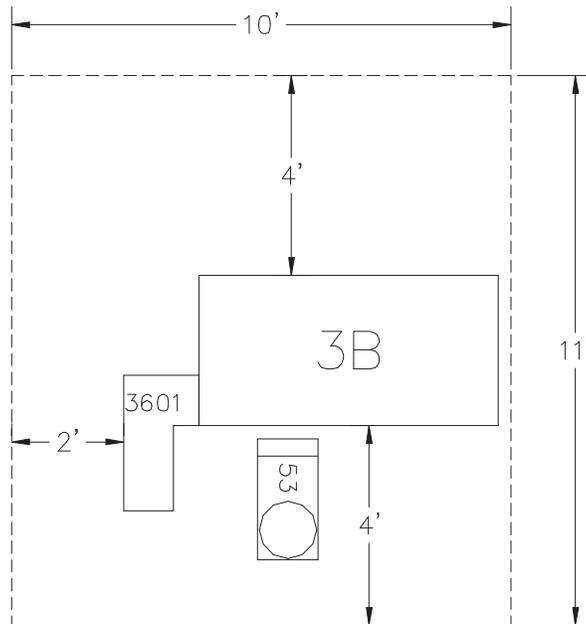


Exhibit 42h
420006, 1/2 Mark Canceler With Culling and Facing Conveyor (10-Ft Work Area)

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 527 Sq Ft

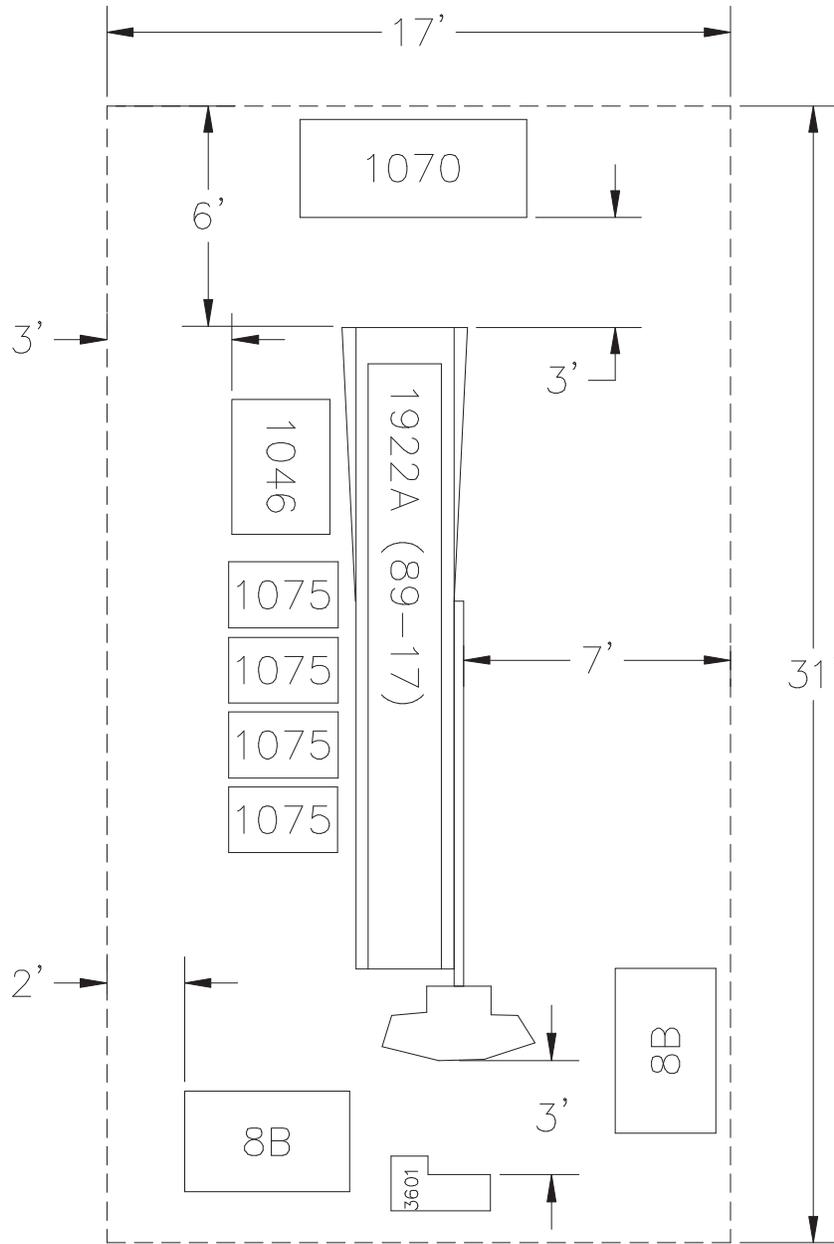


Exhibit 42i

420006a, 1/2 Mark Canceler With Culling and Facing Conveyor (18-Ft Work Area)

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 680 Sq Ft

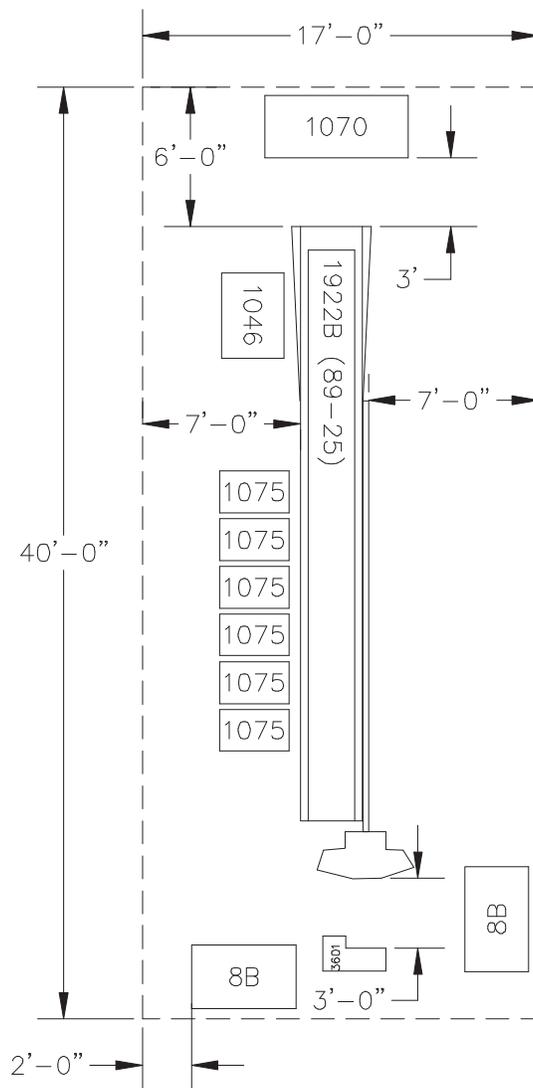


Exhibit 42j

420007, 1/2 Mark Canceler With Tandem Culling and Facing Conveyor (28-Ft Work Area)

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 918 Sq Ft

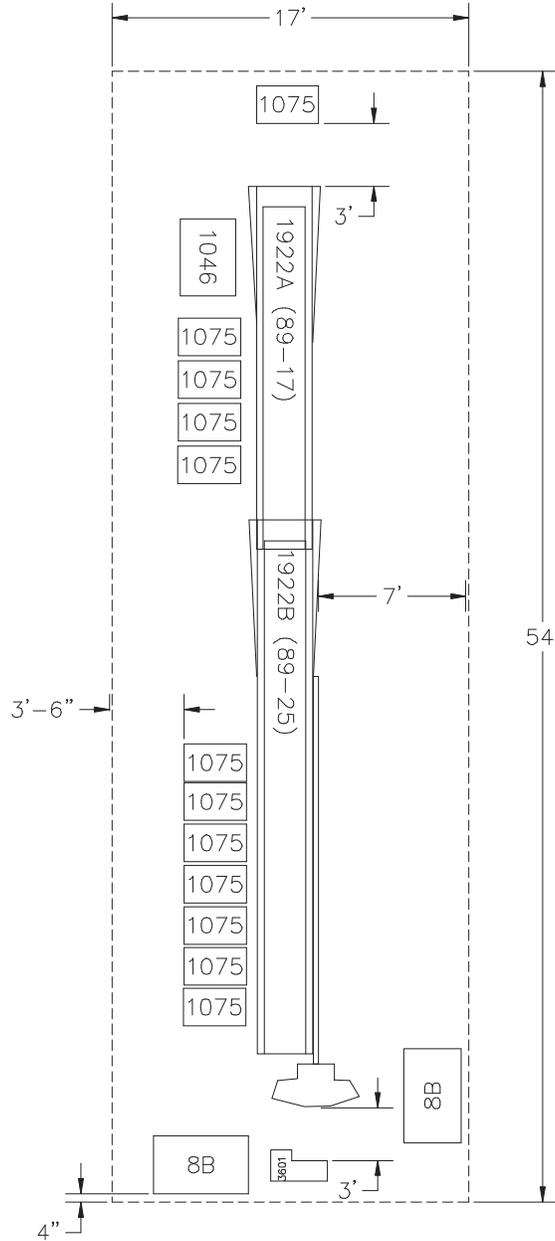


Exhibit 42k

420008, Micro Mark II Facer Canceler System With Culling Belt and Meter Mail Setup

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 2,023 Sq Ft

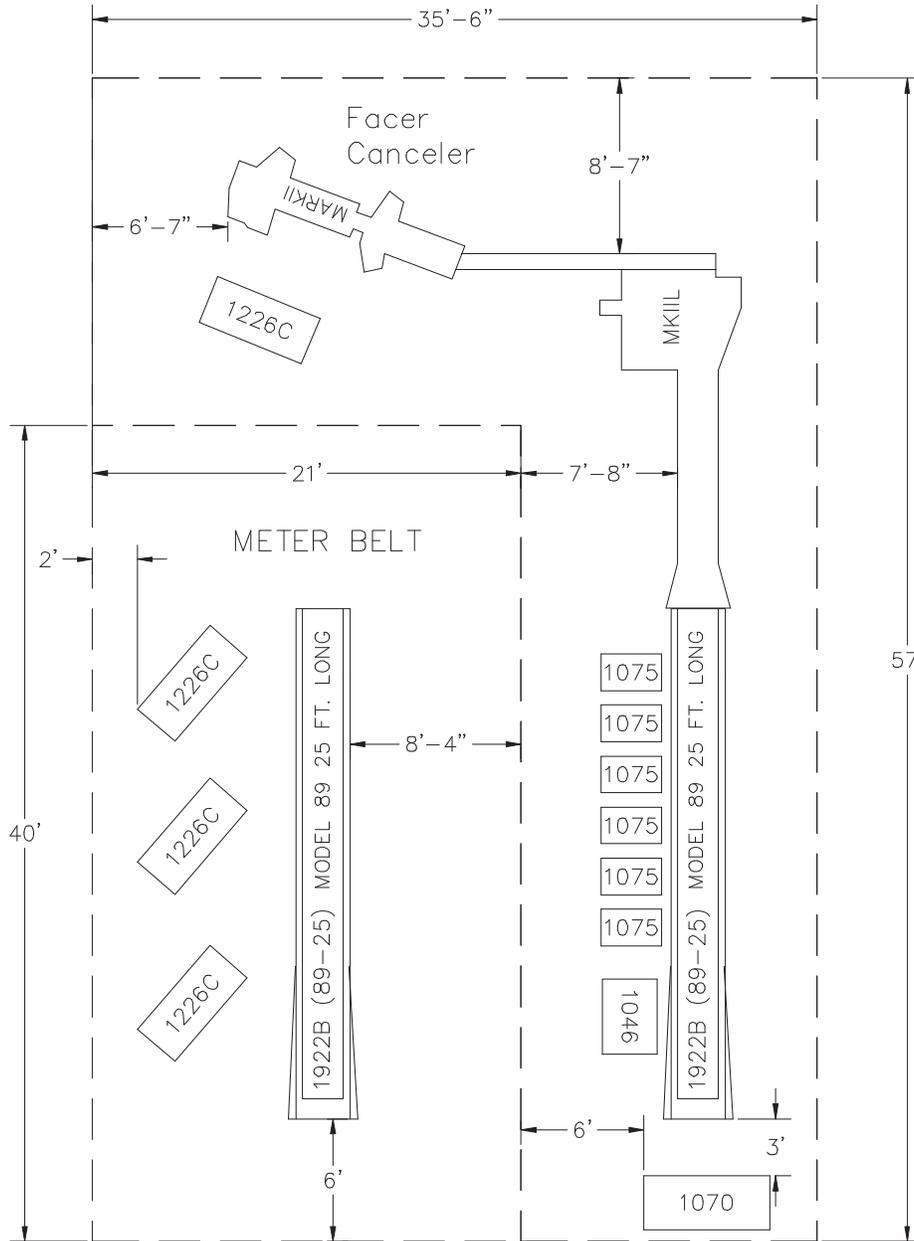


Exhibit 42m
420008b, Micro Mark II Facer Canceler Systems for AFCS Thicks

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 821 Sq Ft

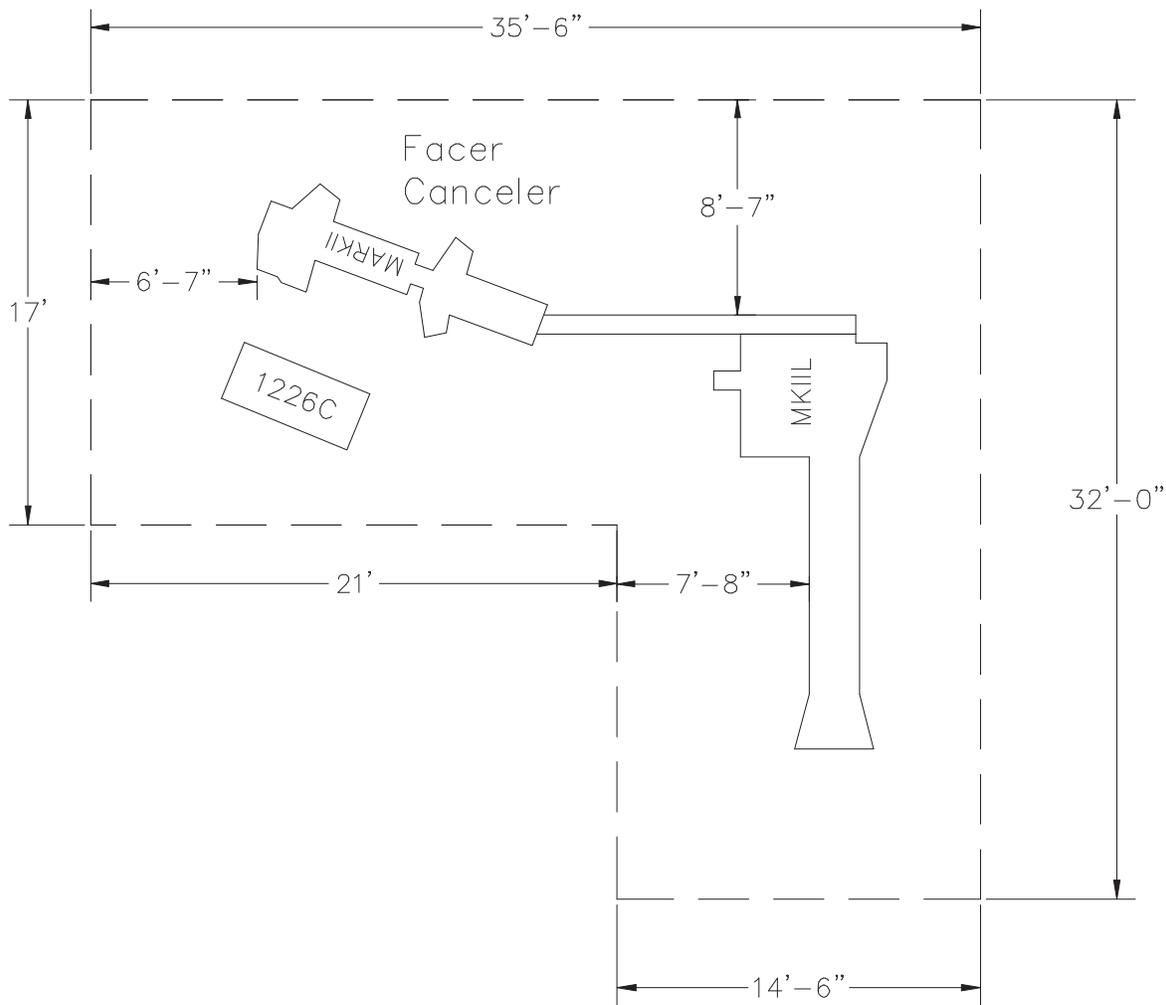


Exhibit 42n
420009, Two Micro Mark II Facer Canceler Systems With Tandem Culling Belt and Tandem Meter Mail Setup

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 4,516 Sq Ft

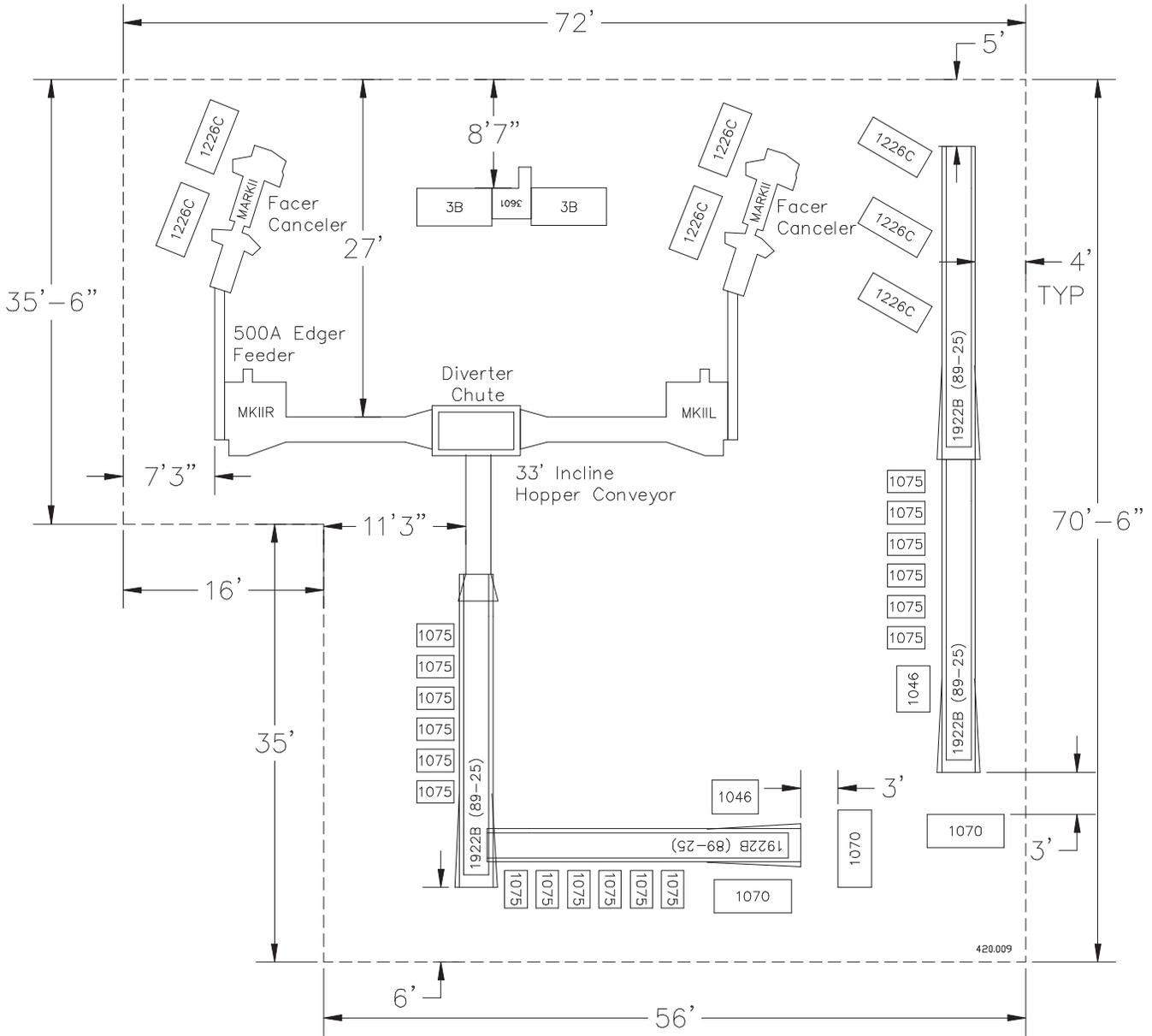


Exhibit 42p
420010a, Advanced Facer Canceler System With Culling Belt

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 2,294 Sq Ft

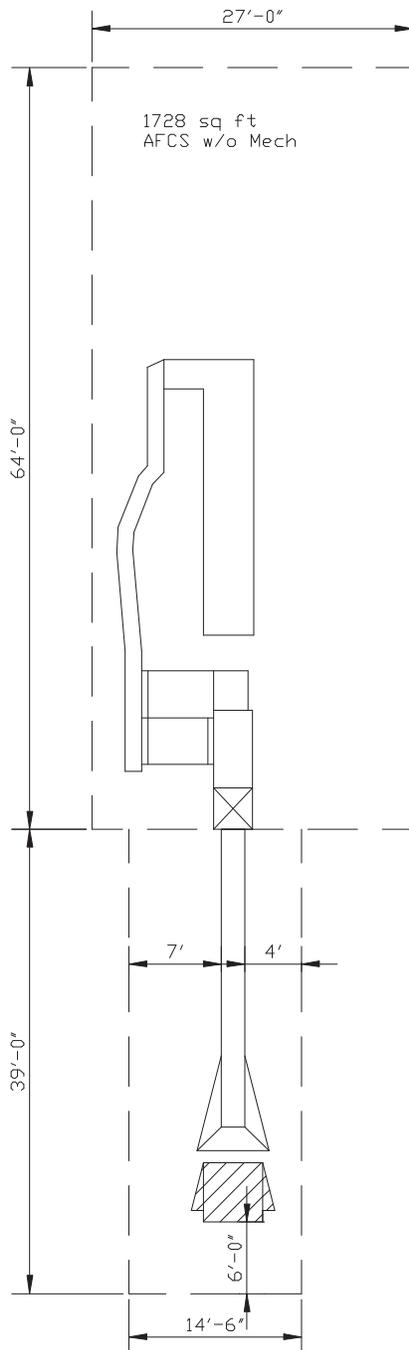


Exhibit 42q
420010b, Two AFCs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 7,300 Sq Ft

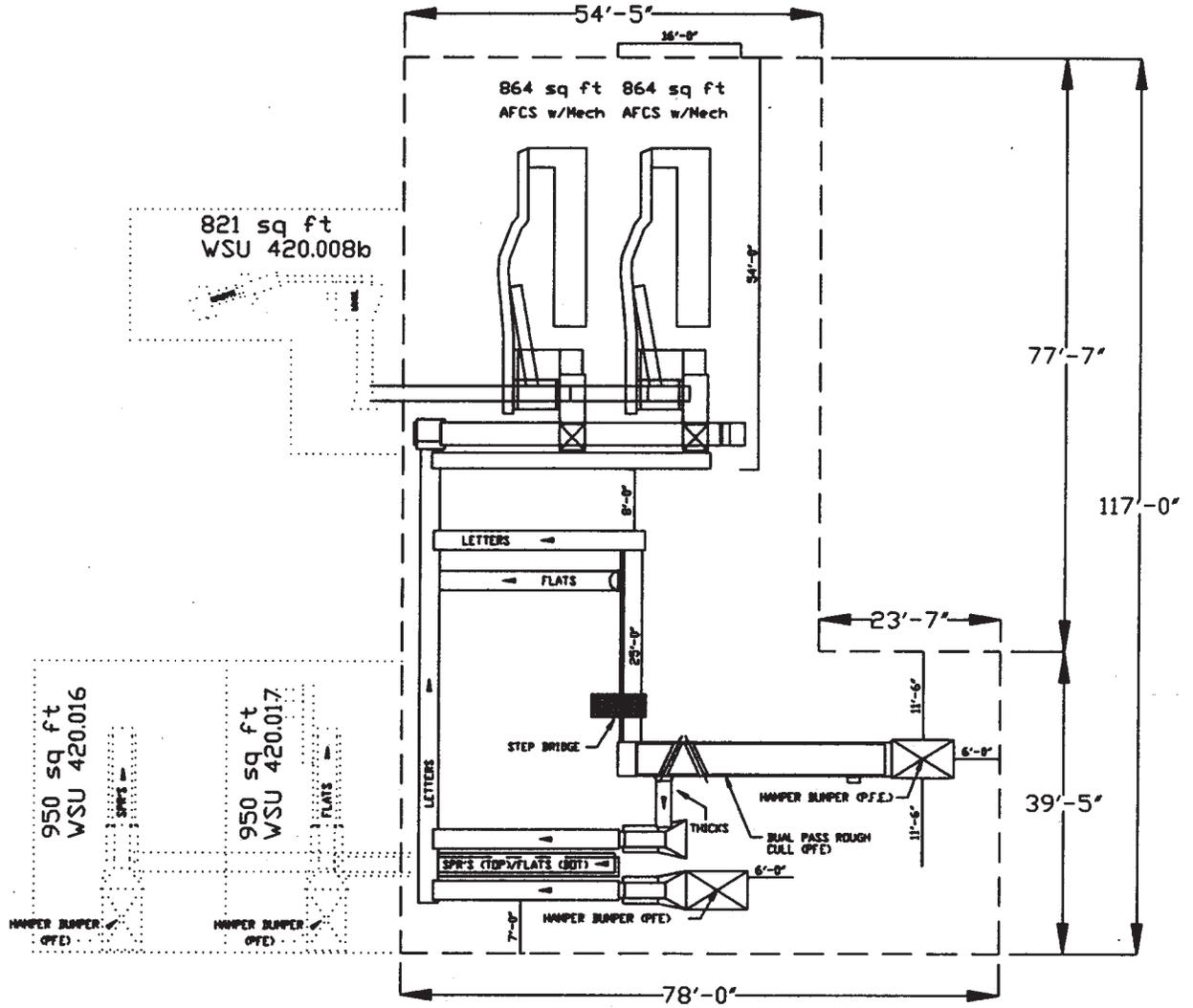


Exhibit 42r
420010c, Three AFCSs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 8,262 Sq Ft

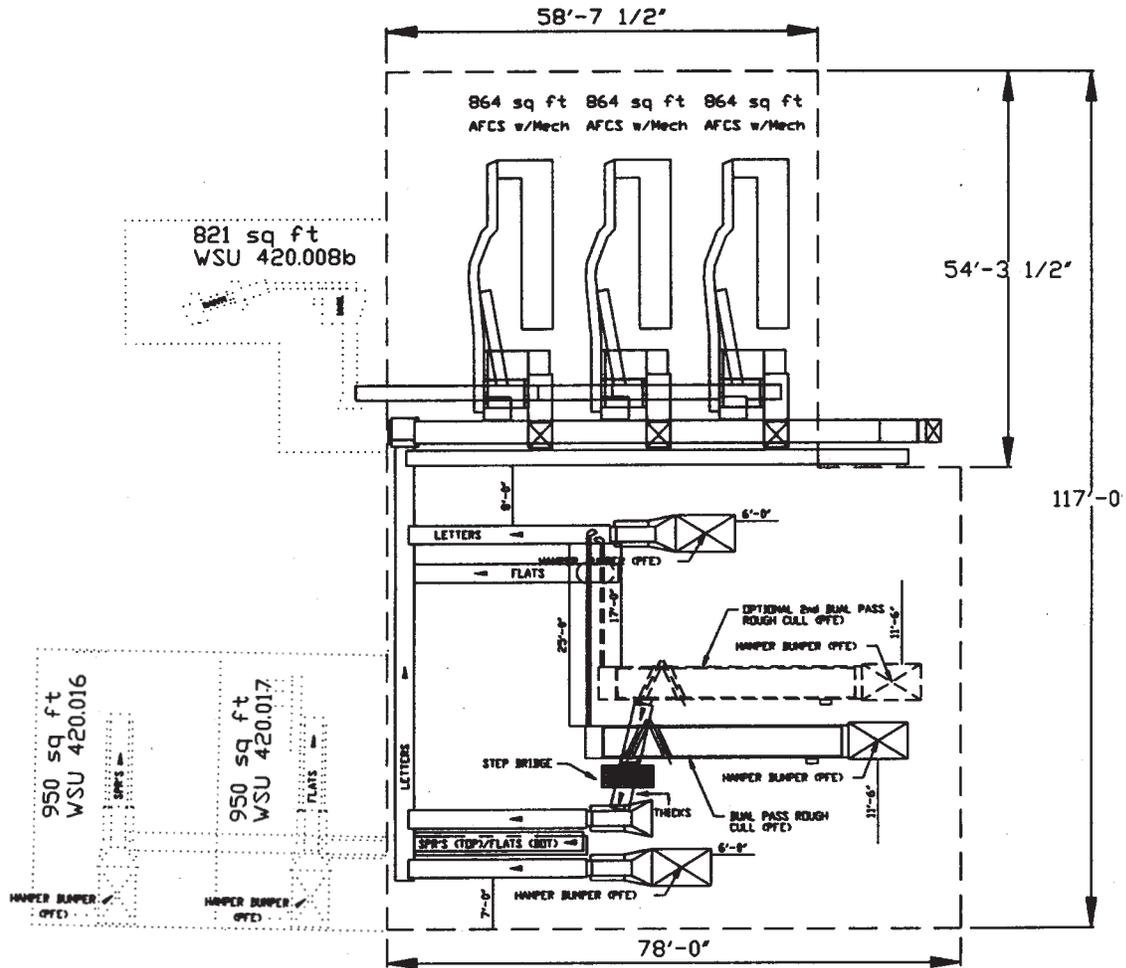


Exhibit 42s
420010d, Four AFCSs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 9,126 Sq Ft

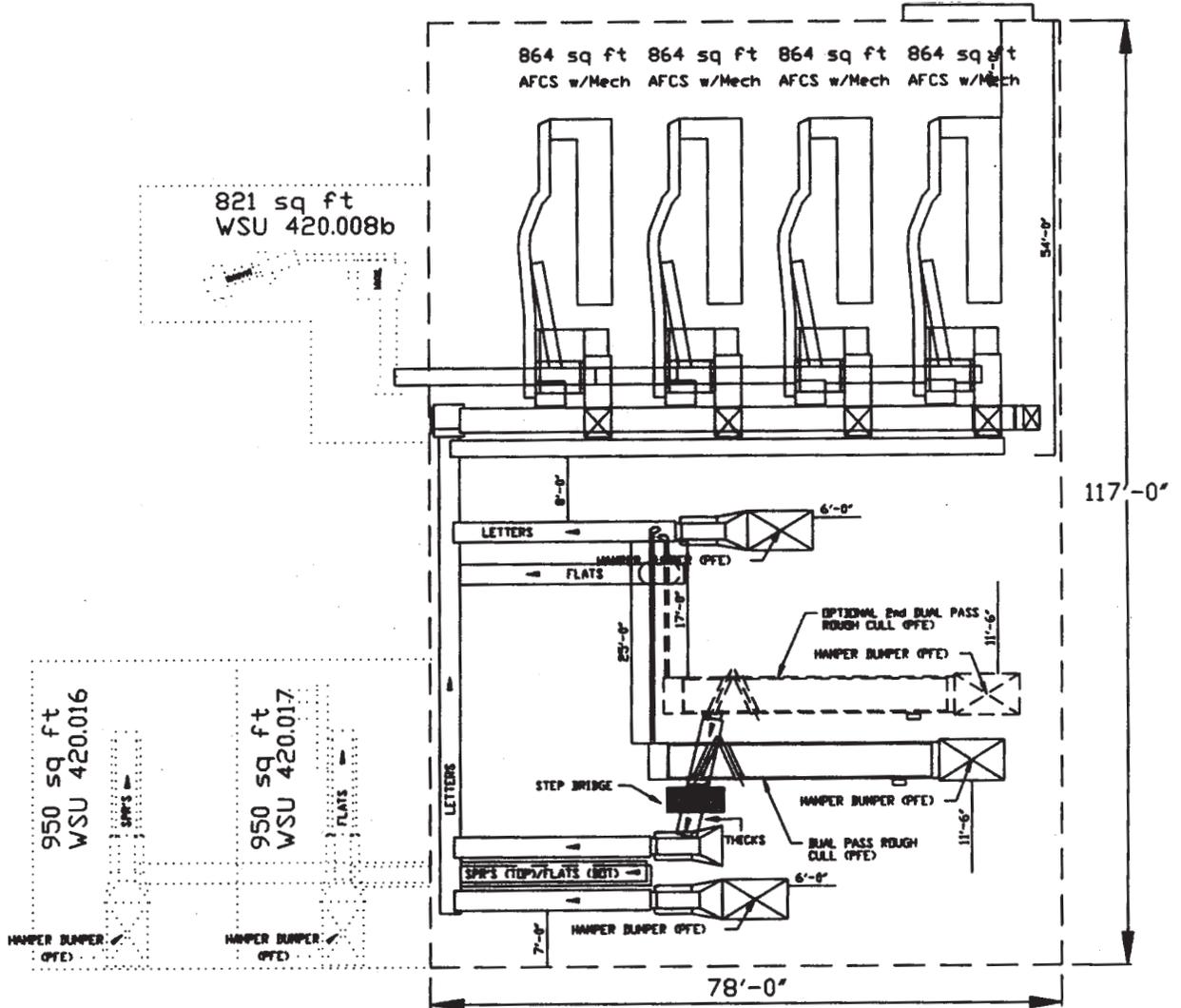


Exhibit 42t
420010e, Five AFCSs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 10,876 Sq Ft

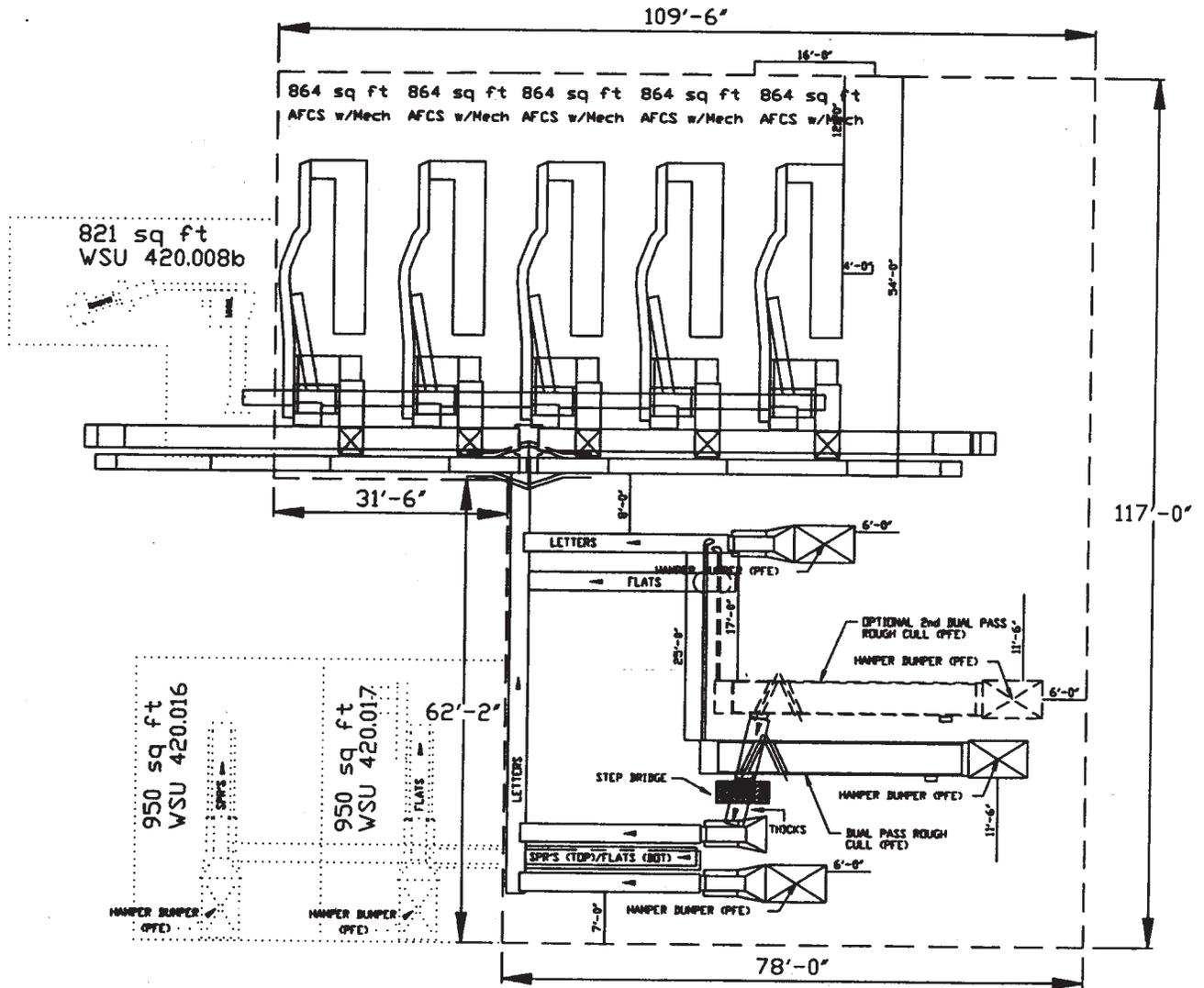


Exhibit 42u
420010f, Six AFCSs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 11,740 Sq Ft

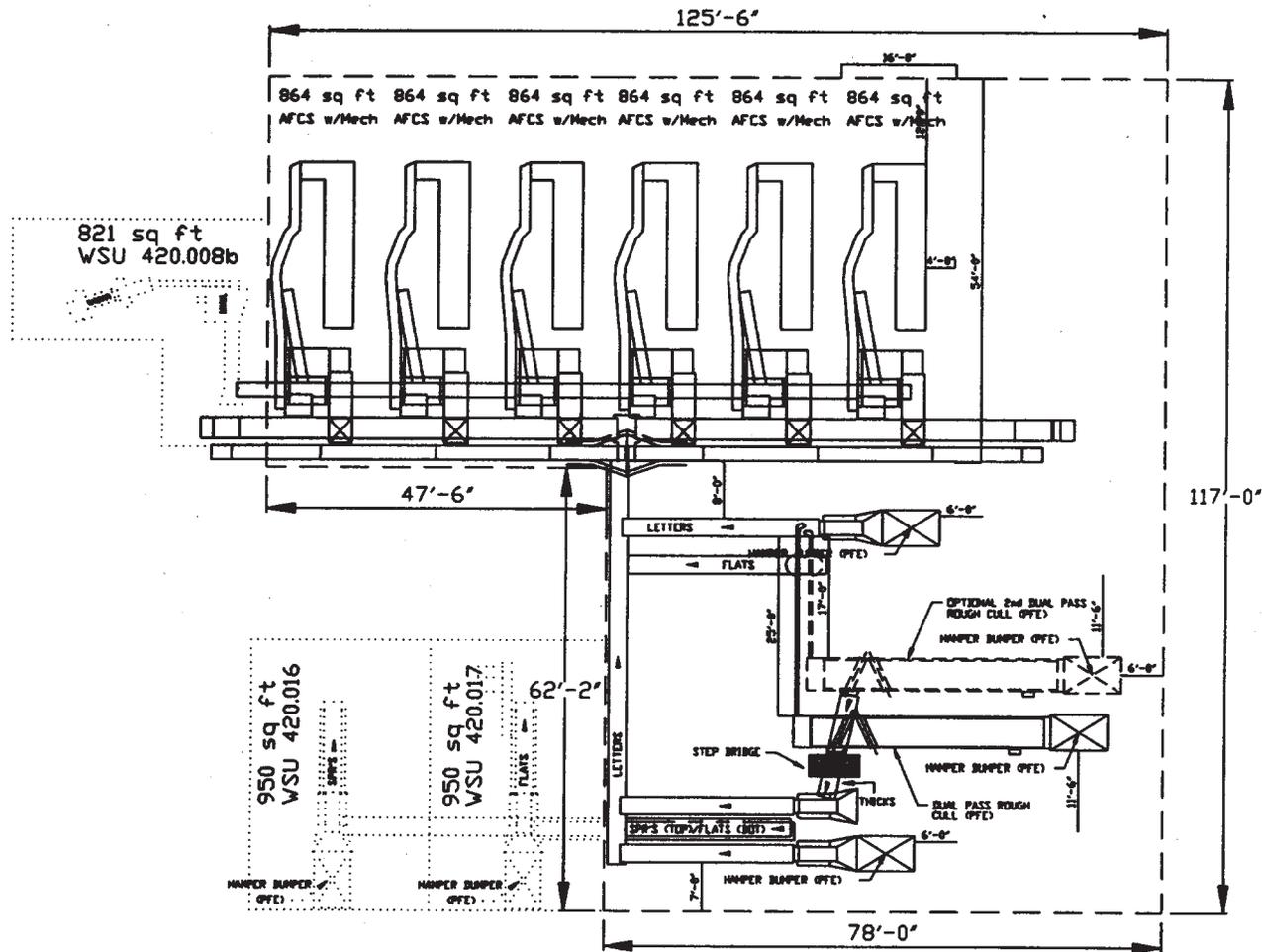


Exhibit 42v
420010g, Seven AFCSs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 11,836 Sq Ft

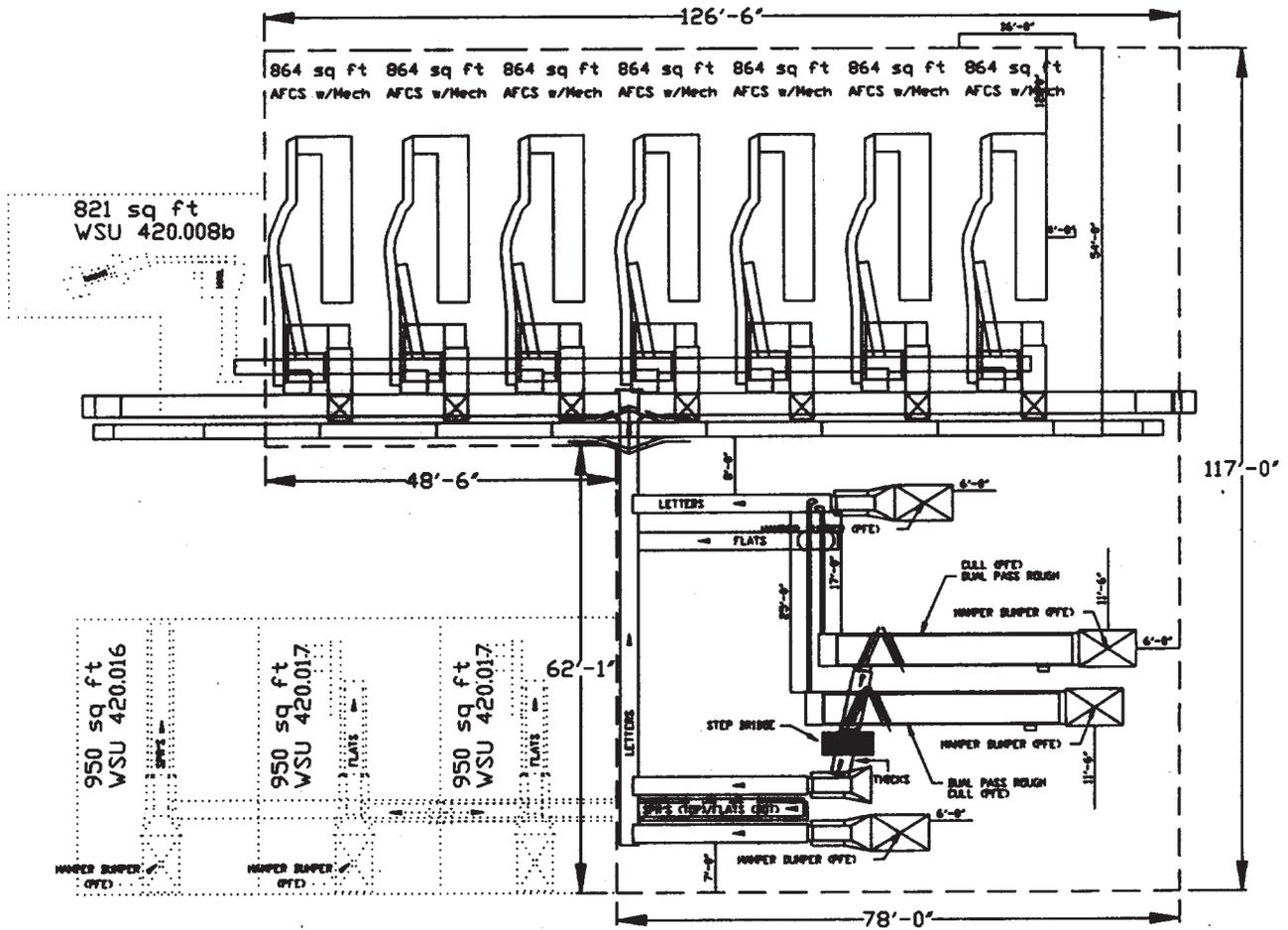


Exhibit 42w
420010h, Eight AFCs With Standard Cull/Feed System

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 12,700 Sq Ft

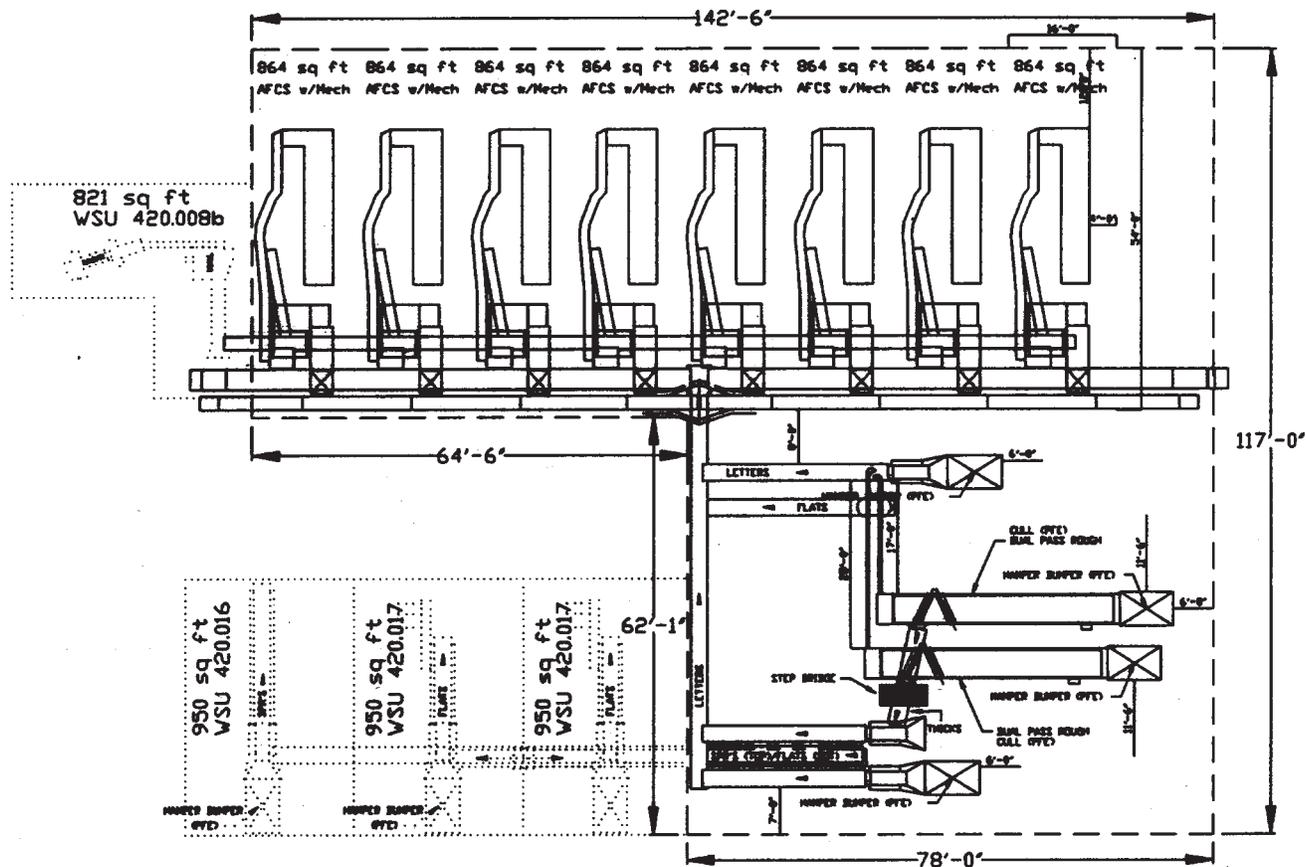


Exhibit 42x
420011, Tandem Meter Mail Setup

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 700 Sq Ft

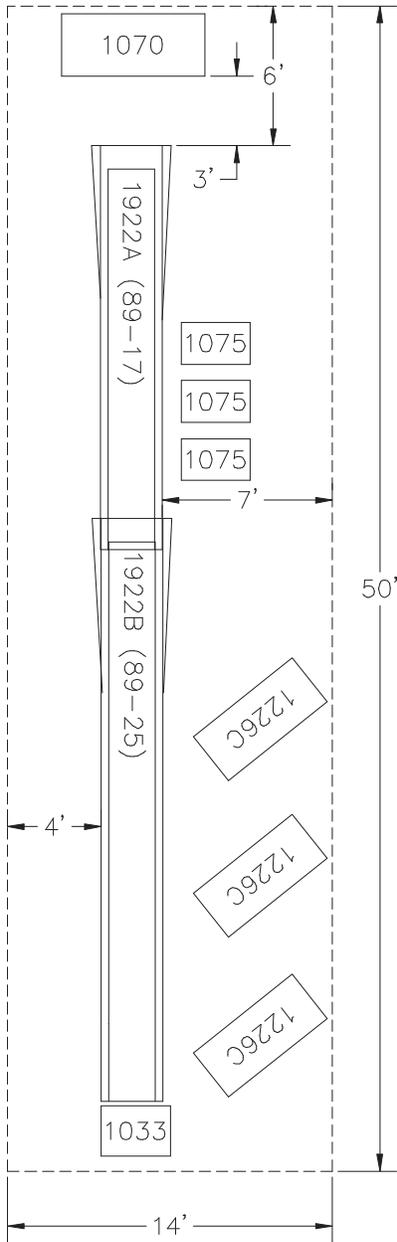


Exhibit 42y
420012, Five-Position Meter Mail Setup

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 648 Sq Ft

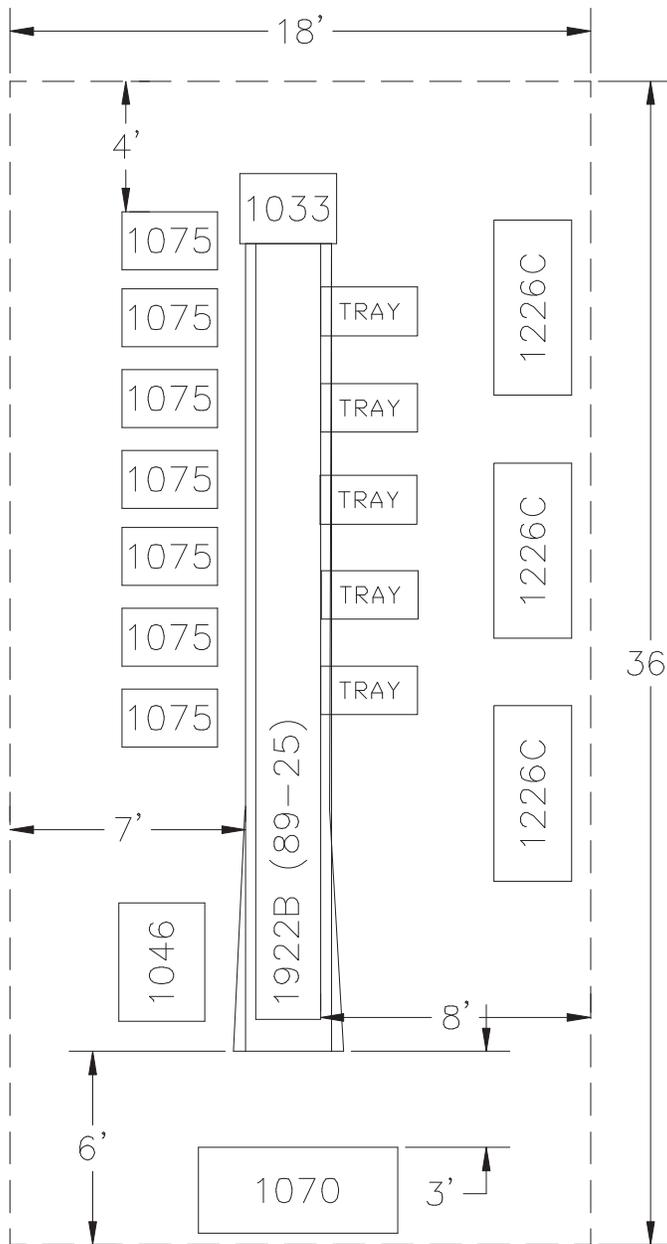
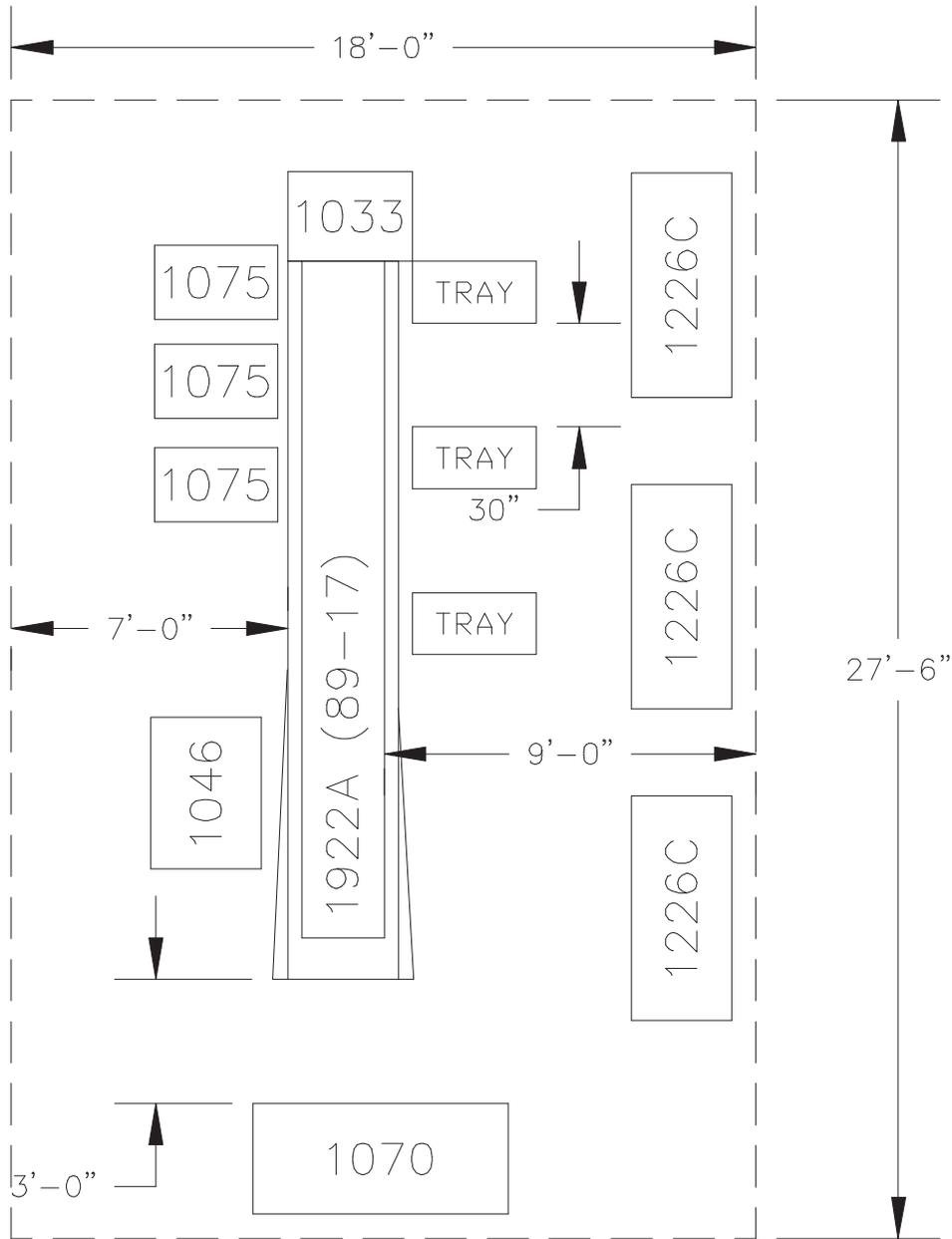


Exhibit 42z
420012a, Three-Position Meter Mail Setup

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 495 Sq Ft



Note: Model 89 conversion is 17'-0" long with 3 separations.

Exhibit 42aa
420013, Storage and Cutting

Date: Sept. 1997

Mail Preparation

Scale: No Scale

Area: 260 Sq Ft

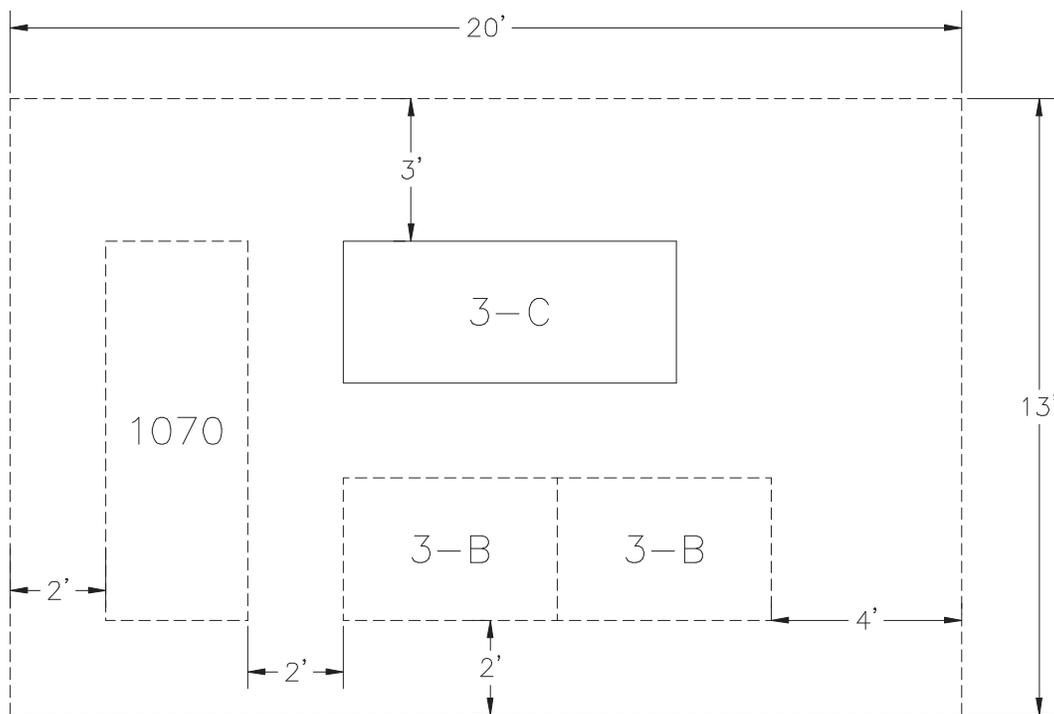


Exhibit 42ab
420014, Pouch Opening With 63 Separations

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 970 Sq Ft

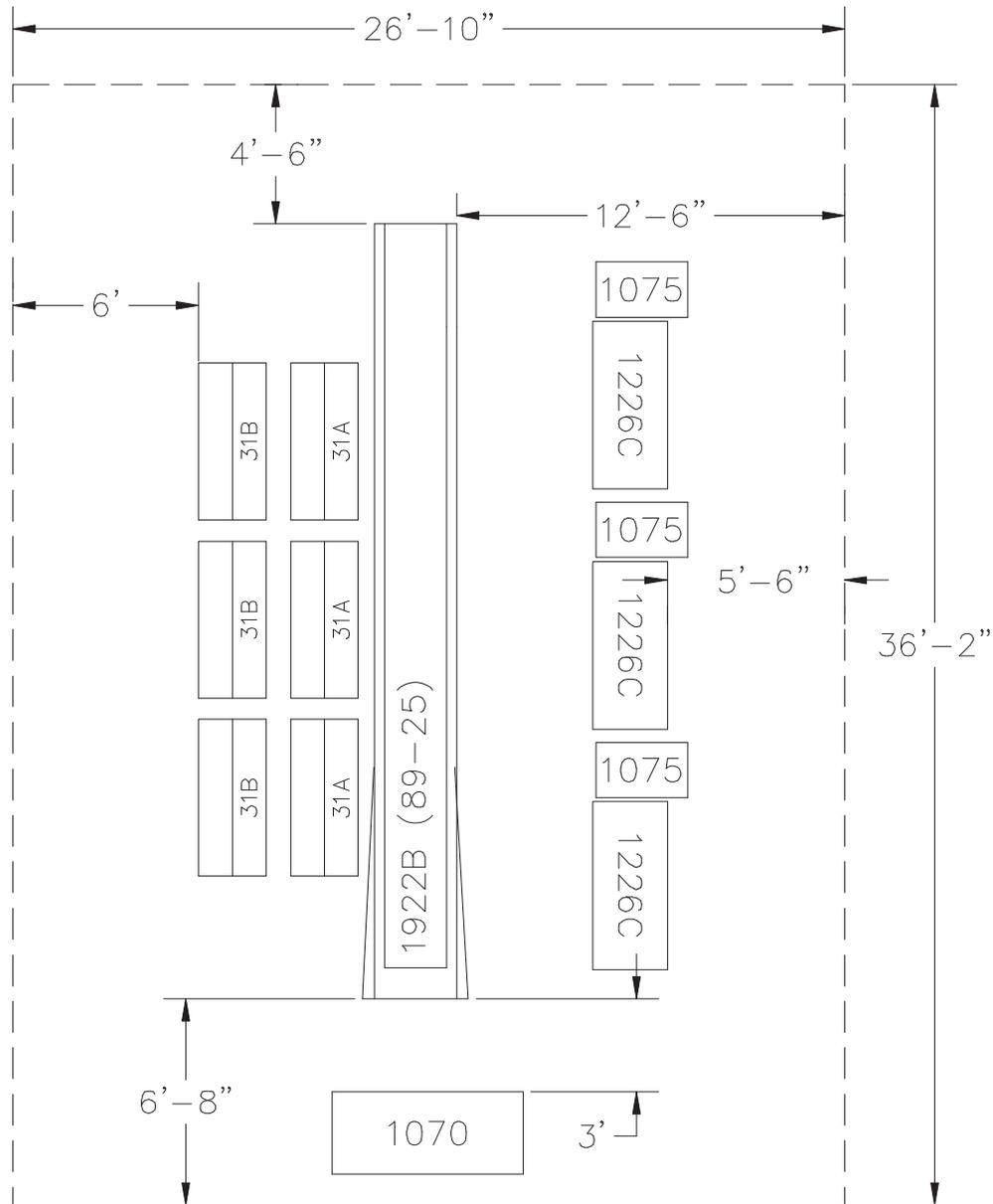


Exhibit 42ac
420014a, Pouch Opening With 48 Separations

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 444 Sq Ft

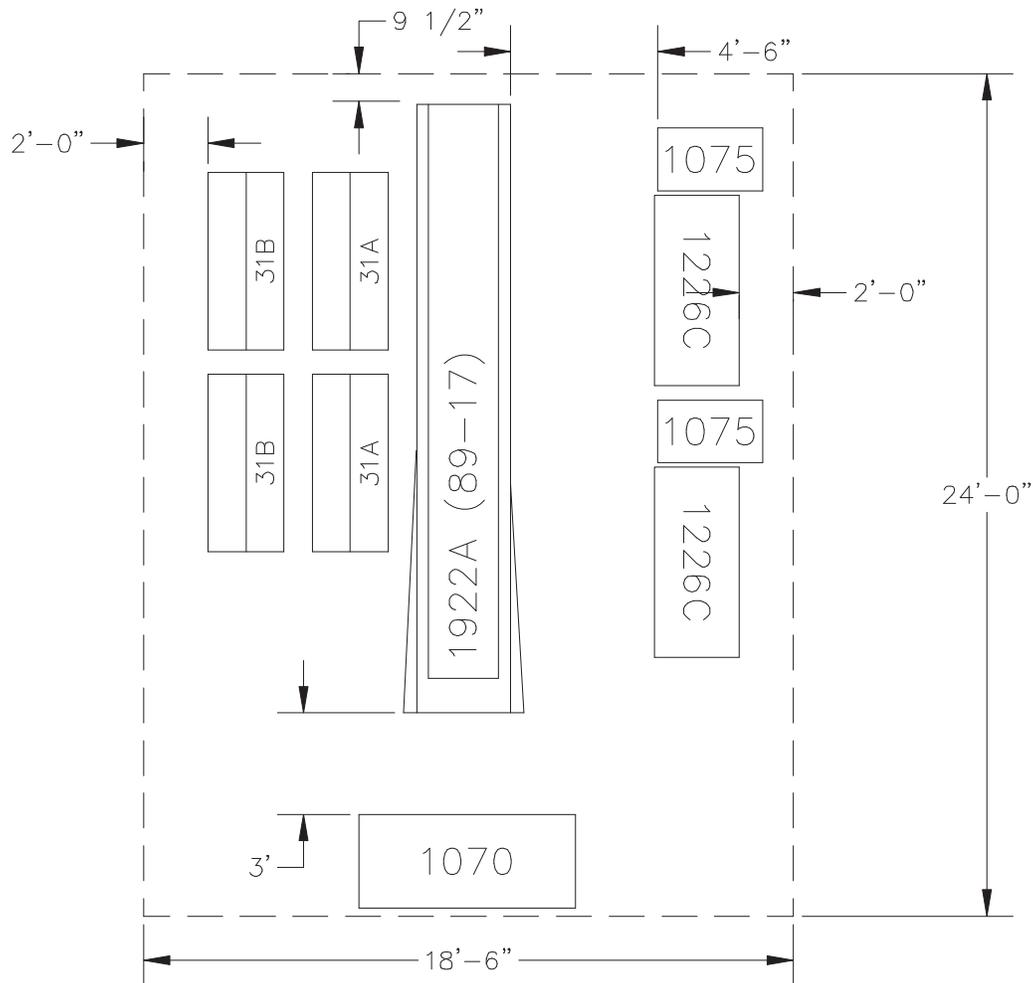


Exhibit 42ad

420015, Sack Opening, Paper, and SPRs — Primary Cutting and Setup (58 Separations)

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 1,000 Sq Ft

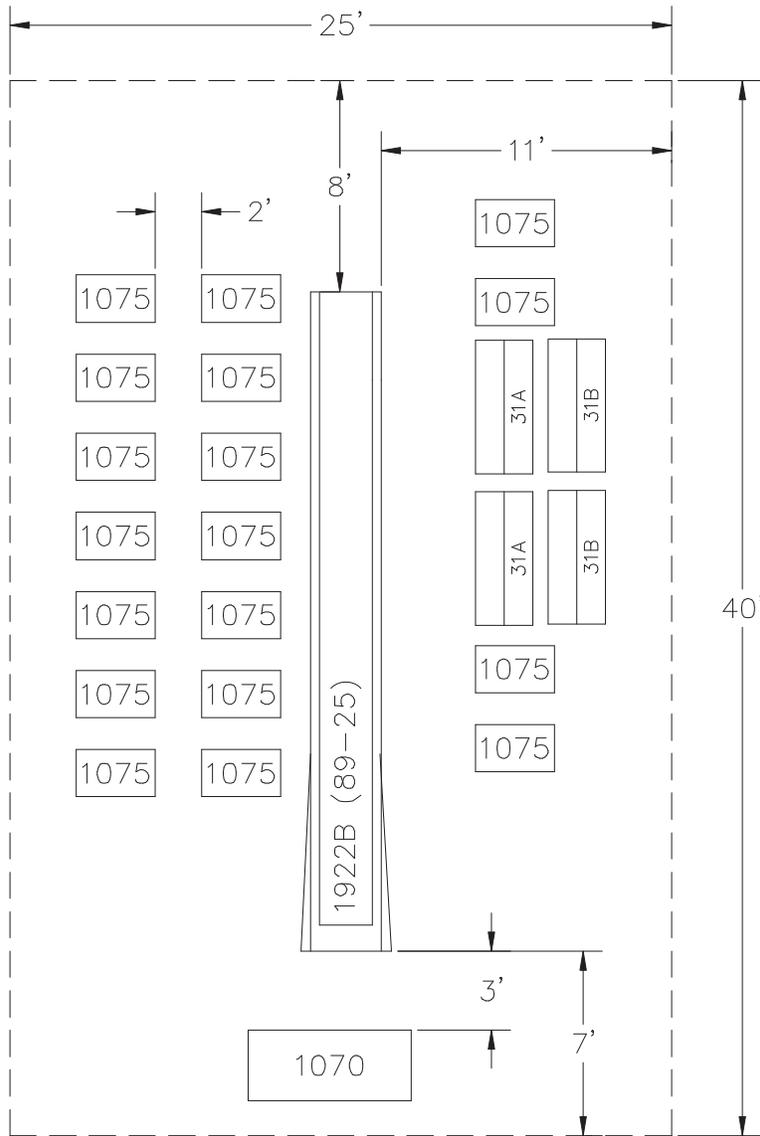


Exhibit 42ae
420016a, SPR and Thicks Canceling (17-Ft Belt)

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 950 Sq Ft

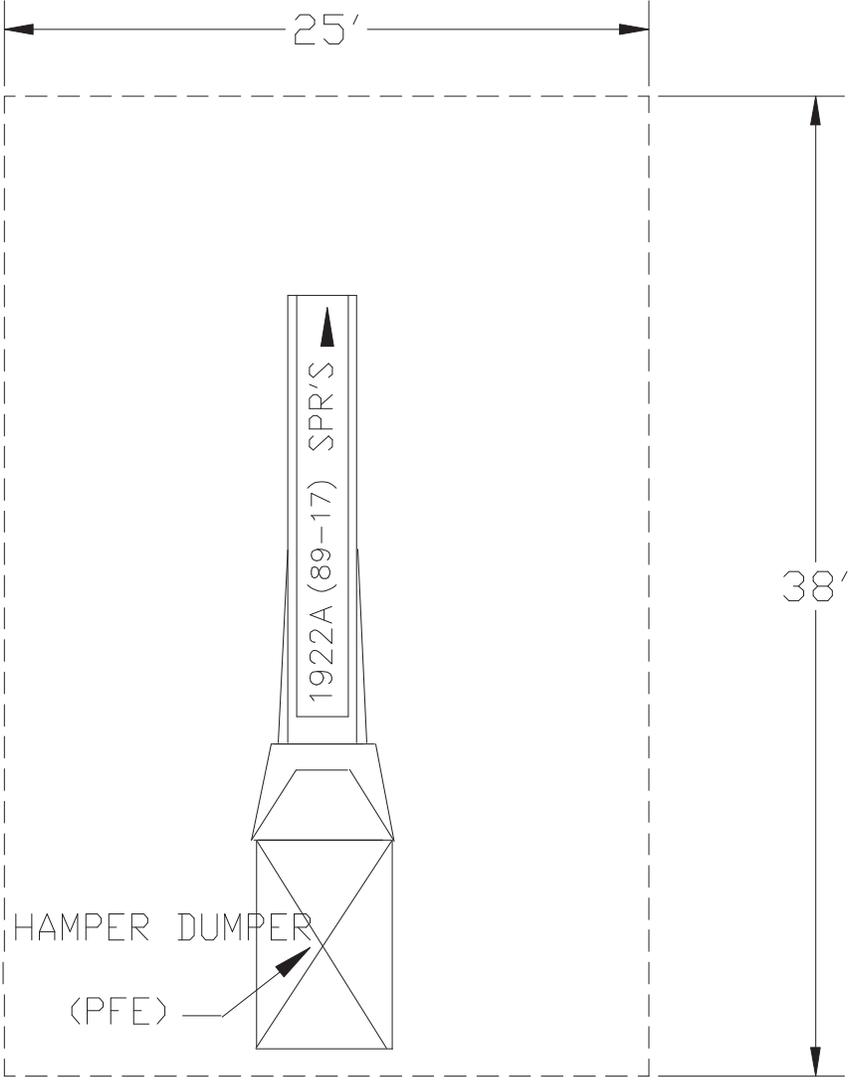


Exhibit 42af
420016b, SPR and Thicks Canceling (25-Ft Belt)

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 1,175 Sq Ft

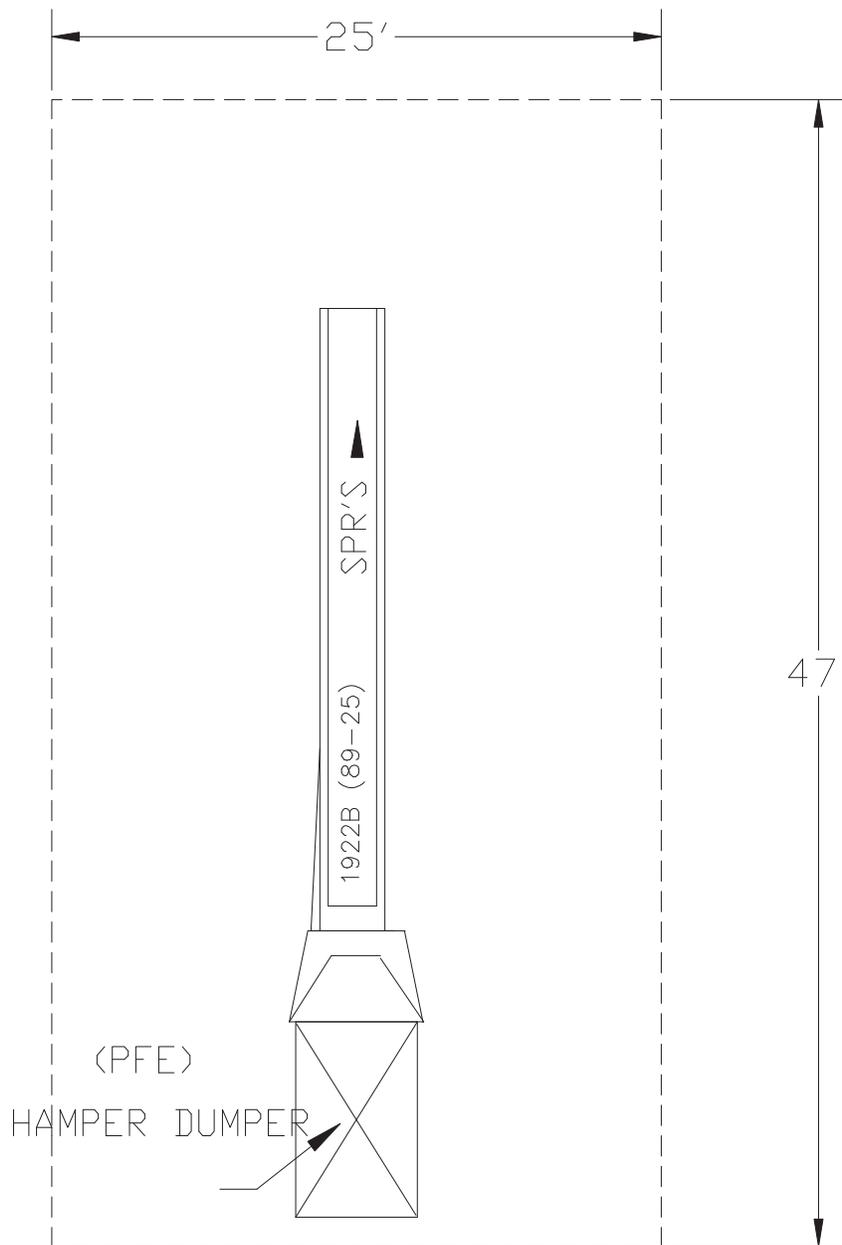


Exhibit 42ag
420017a, Model 15 Flats Canceler/Stacker (17-Ft Belt)

Date: Dec. 1994

Mail Preparation

Scale: No Scale

Area: 950 Sq Ft

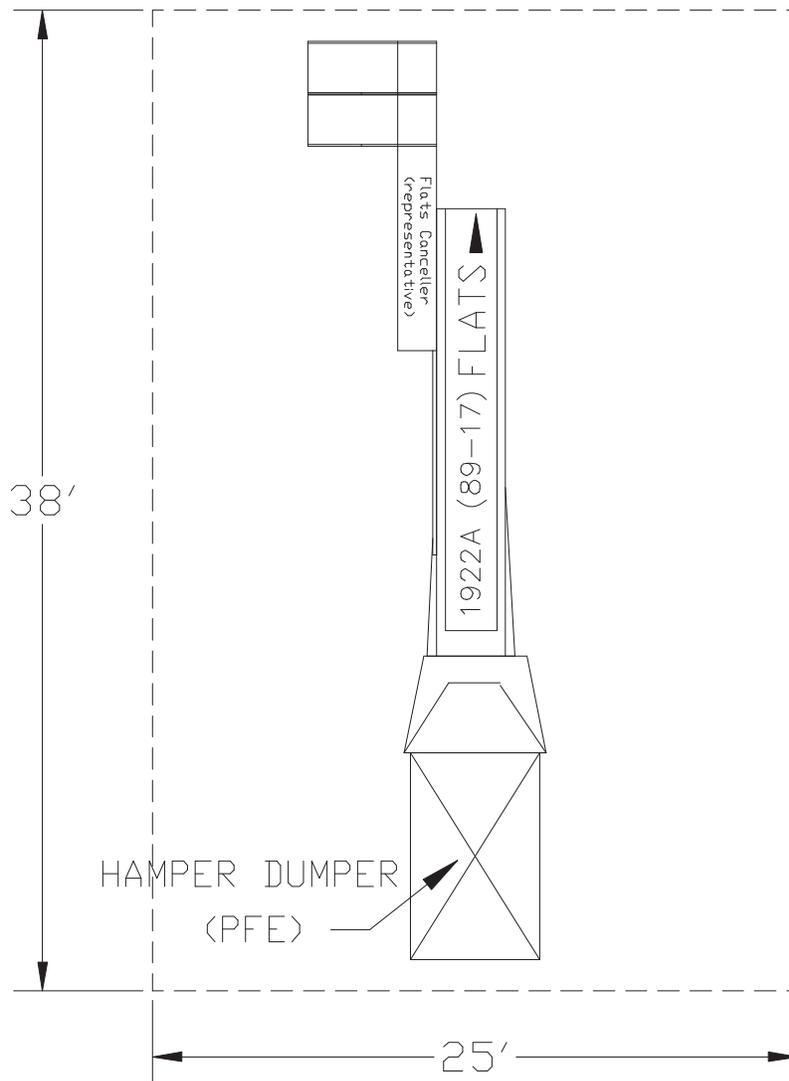
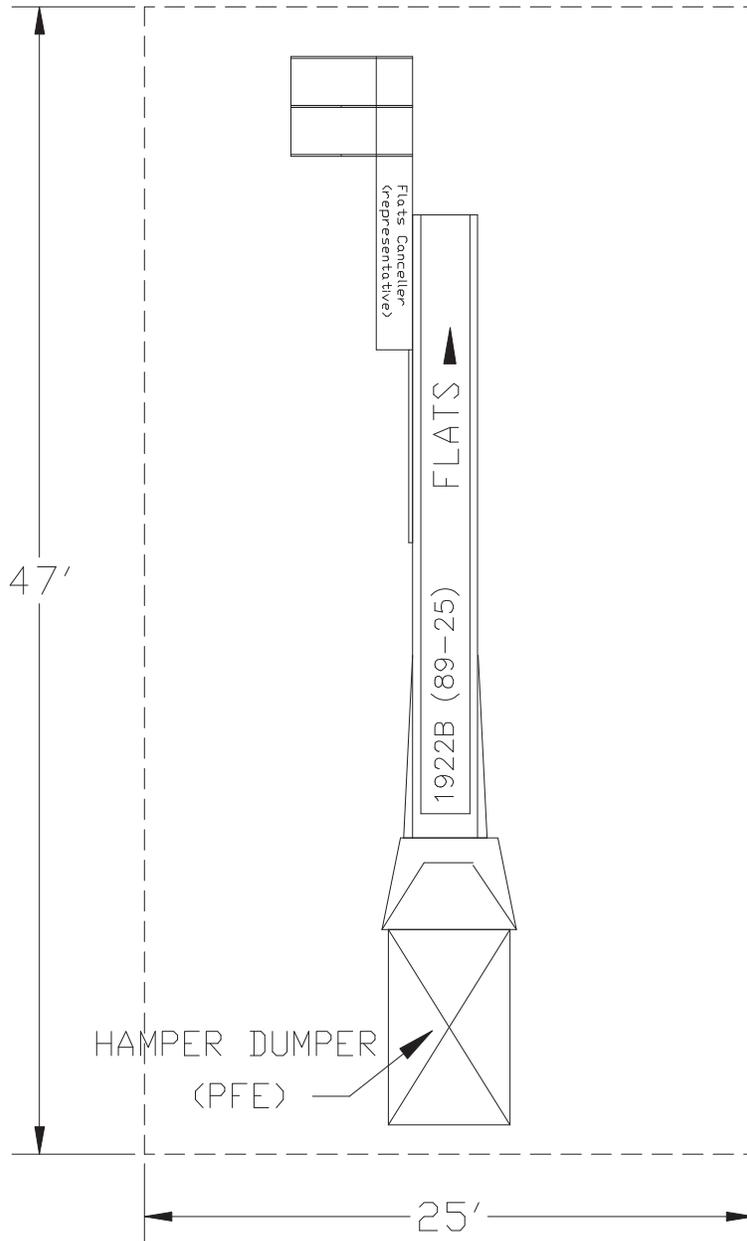


Exhibit 42ah
420017b, Model 15 Flats Canceler/Stacker (25-Ft Belt)

Date: Dec. 1994
Mail Preparation
Scale: No Scale
Area: 1,175 Sq Ft



43 Distribution of Letter and Flat Mail

431 Letter Mail

The footprint shown in the WSUs of the 431 series provides for movement of mail and personnel within the work center, exclusive of dedicated aisles, and an allowance for column interference and unusable space. Exhibit 431a lists the WSUs currently used for distributing letter mail. Exhibits 431b through 431m illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 431a

WSUs Used for Distribution of Letter Mail

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Description |
|------------|------------------------|----------------------|---|
| 431001 | 431001.DWG | 65 | Letter Distribution Workstation — Open Back (77 Separations) |
| 431001a | 431001A.DWG | 36 | Letter Distribution Workstation — Closed Back (77 Separations) |
| 431006 | 431006.DWG | 240 | Letter Mail Labeling Machine — 200 (LMLM-200) |
| 431006a | 431006A.DWG | 364 | Letter Mail Labeling Machine — 400 (LMLM-400) |
| 431007 | 431007.DWG | 2,250 | Twelve-Position Multiposition Letter Sorting Machine (MPLSM) |
| 431007a | 431007A.DWG | 468 | Single-Position Letter Sorting Machine (SPLSM) |
| 431009 | 431009.DWG | 1,676 | Mail Processing Barcode Sorter (MPBCS) With 96 Stackers |
| 431010a | 431010A.DWG | 1,425 | 44-Stacker Multiline Optical Character Reader (MLOCR) — Base Unit |
| 431010b | 431010B.DWG | 1,712 | 60-Stacker Multiline Optical Character Reader (MLOCR) — Base Unit |
| 431011 | 431011.DWG | 351 | National Directory Support System (NDSS), MICROVAX 3400, Image Processing Subsystem (IPSS), or ALPHA Site |
| 431012 | 431012.DWG | 1,080 | Sleeving, Weighing, and Strapping Area: Nonmechanized System |
| 431013 | 431013.DWG | 870 | Sleeving, Weighing, and Strapping Area: Mechanized System |

Exhibit 431b

431001, Letter Distribution Workstation — Open Back (77 Separations)

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 65 Sq Ft

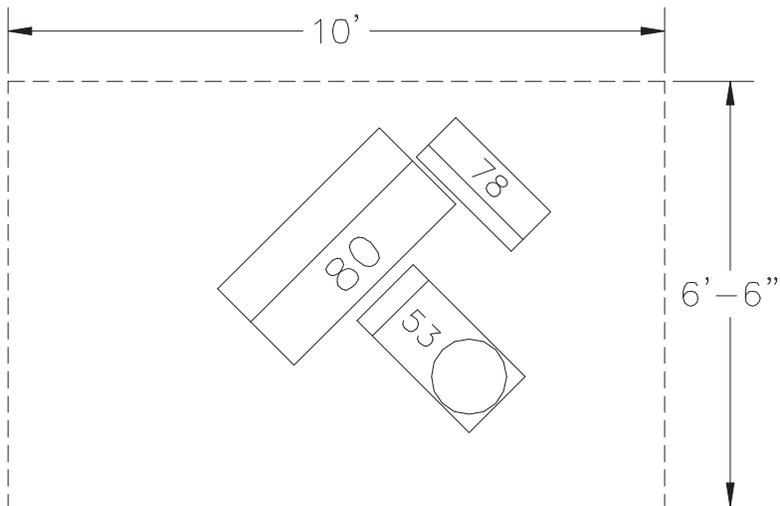


Exhibit 431c

431001a, Letter Distribution Workstation — Closed Back (77 Separations)

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 36 Sq Ft

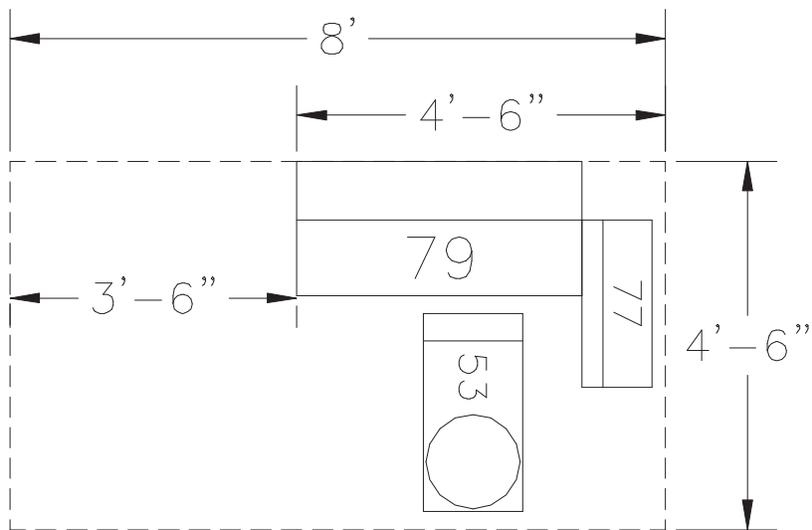


Exhibit 431d
431006, Letter Mail Labeling Machine — 200 (LMLM-200)

Date: Dec. 1994
Distribution Letter Mail
Scale: No Scale
Area: 240 Sq Ft

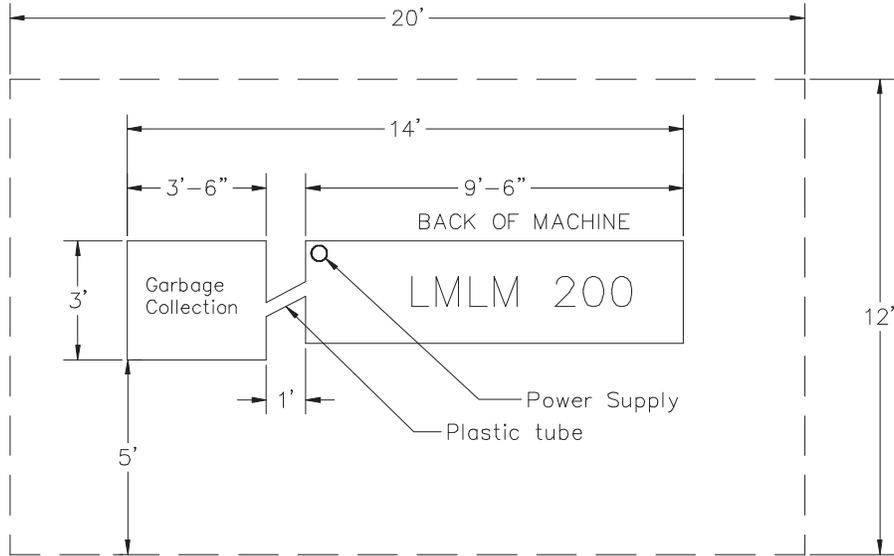


Exhibit 431e
431006a, Letter Mail Labeling Machine — 400 (LMLM-400)

Date: Dec. 1994
Distribution Letter Mail
Scale: No Scale
Area: 364 Sq Ft

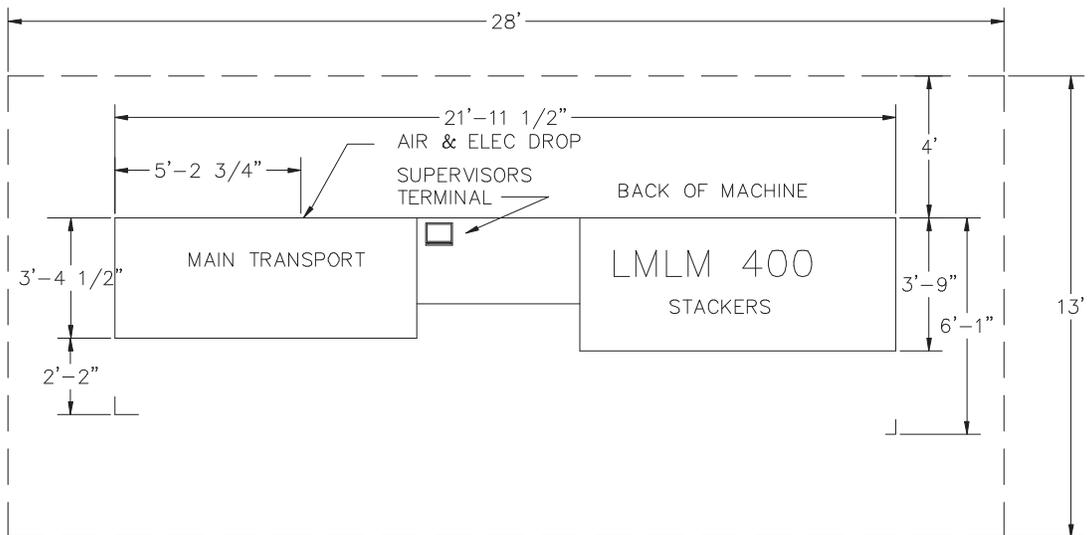
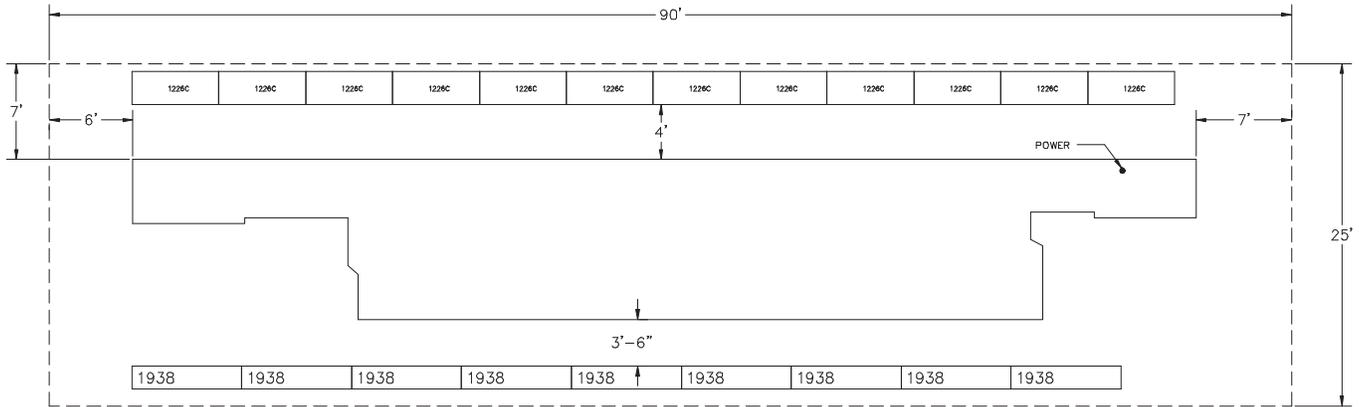


Exhibit 431f
431007, Twelve-Position Multiposition Letter Sorting Machine (MPLSM)

Date: Dec. 1994
Distribution Letter Mail
Scale: No Scale
Area: 2,250 Sq Ft



Specifications:

- Machine height: 9'-6".
- Overhead clearance required: 12'-6" minimum (14'-0" preferred).

Exception: Conveyors or lookout galleries crossing at 90 degrees over the machine may be 12'-0".

Exhibit 431g
431007a, Single-Position Letter Sorting Machine (SPLSM)

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 468 Sq Ft

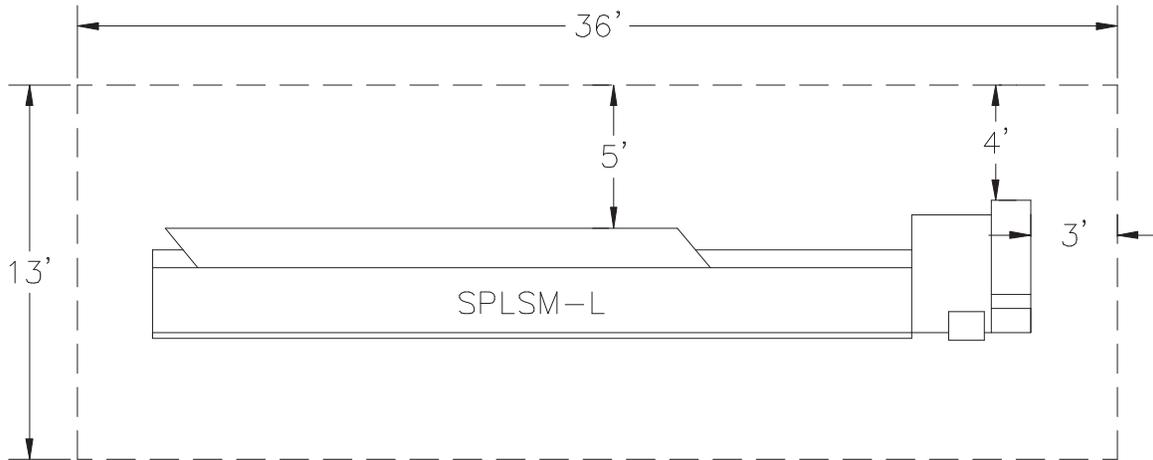


Exhibit 431h
431009, Mail Processing Barcode Sorter (MPBCS) With 96 Stackers

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 1,676 Sq Ft

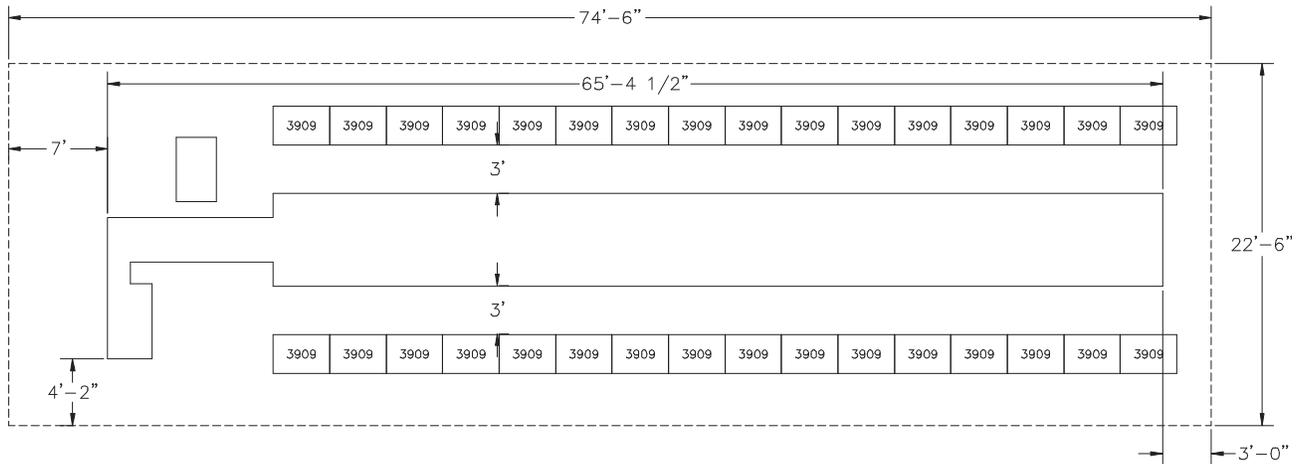


Exhibit 431i

431010a, 44-Stacker Multiline Optical Character Reader (MLOCR) — Base Unit

Date: Dec. 1994
Distribution Letter Mail
Scale: No Scale
Area: 1,425 Sq Ft

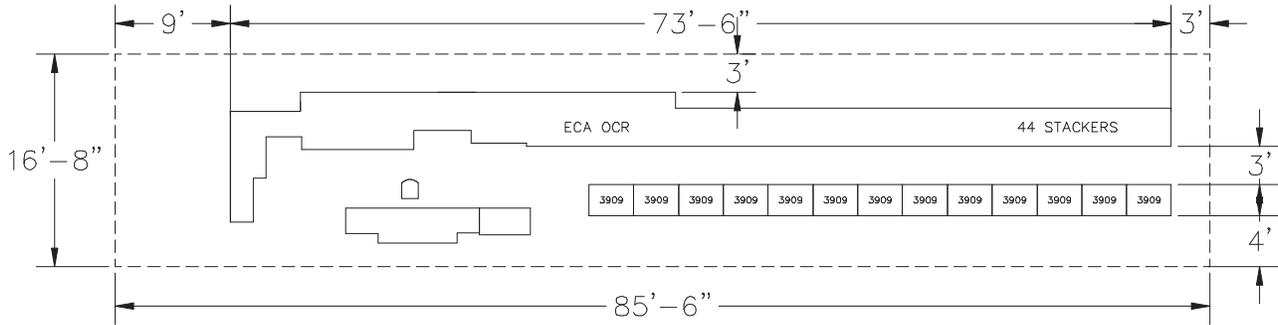


Exhibit 431j

431010b, 60-Stacker Multiline Optical Character Reader (MLOCR) — Base Unit

Date: Dec. 1994
Distribution Letter Mail
Scale: No Scale
Area: 1,712 Sq Ft

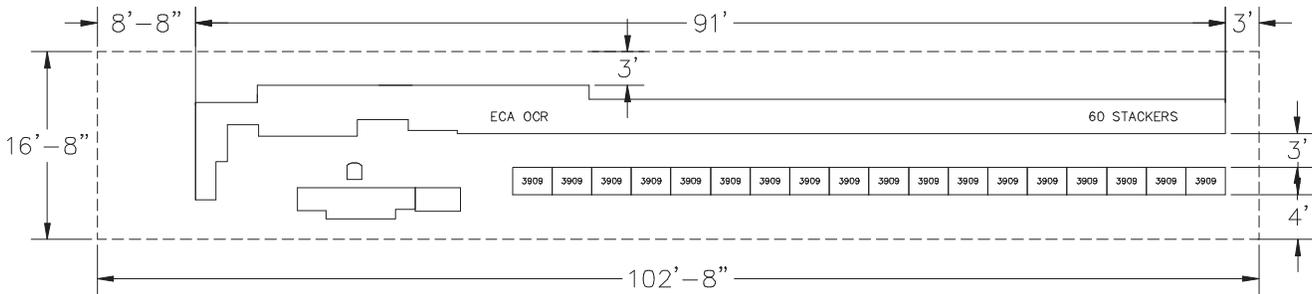


Exhibit 431k
431011, NDSS, MICROVAX 3400, IPSS, or ALPHA Site

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 351 Sq Ft

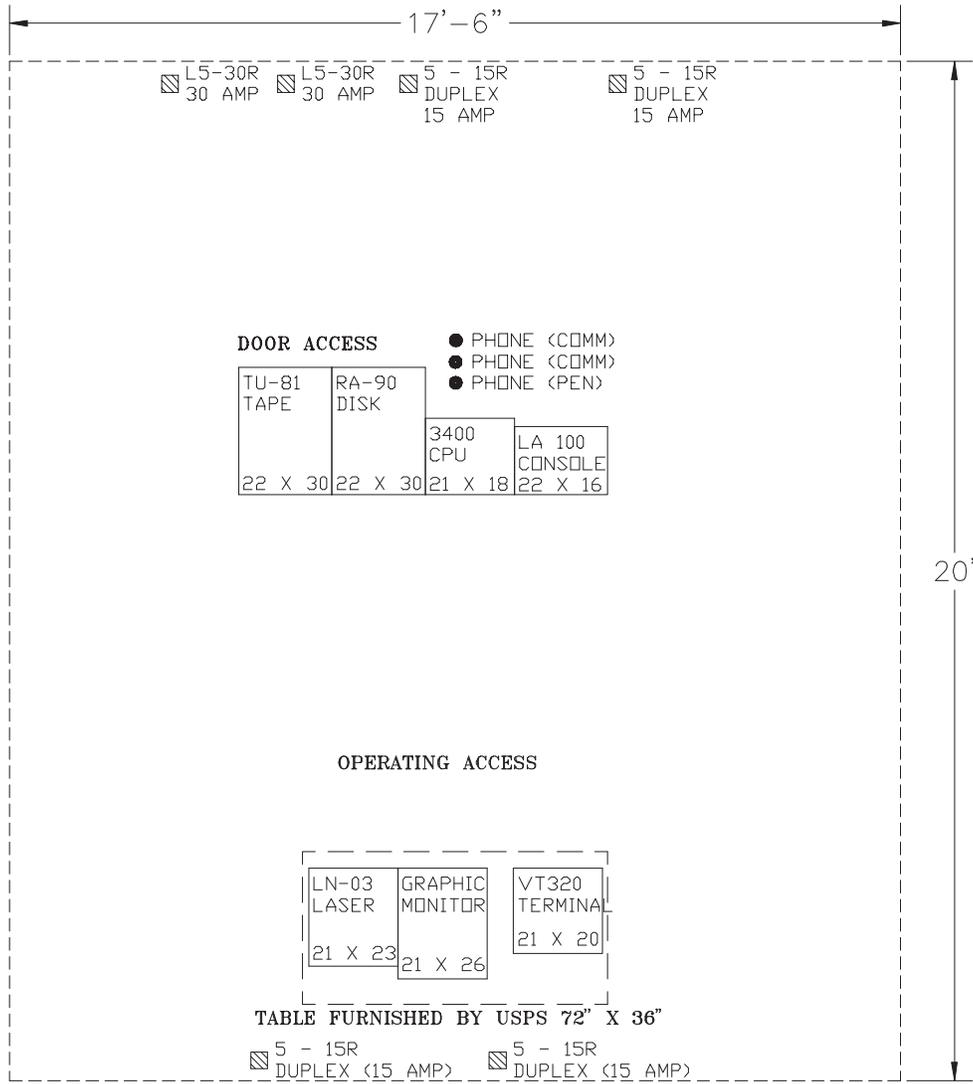
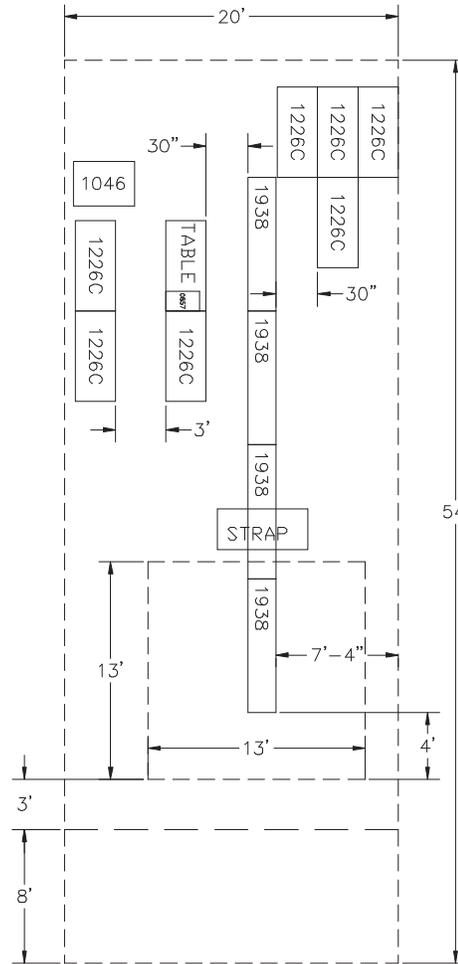


Exhibit 4311

431012, Sleeving, Weighing, and Strapping Area: Nonmechanized System

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 1,080 Sq Ft

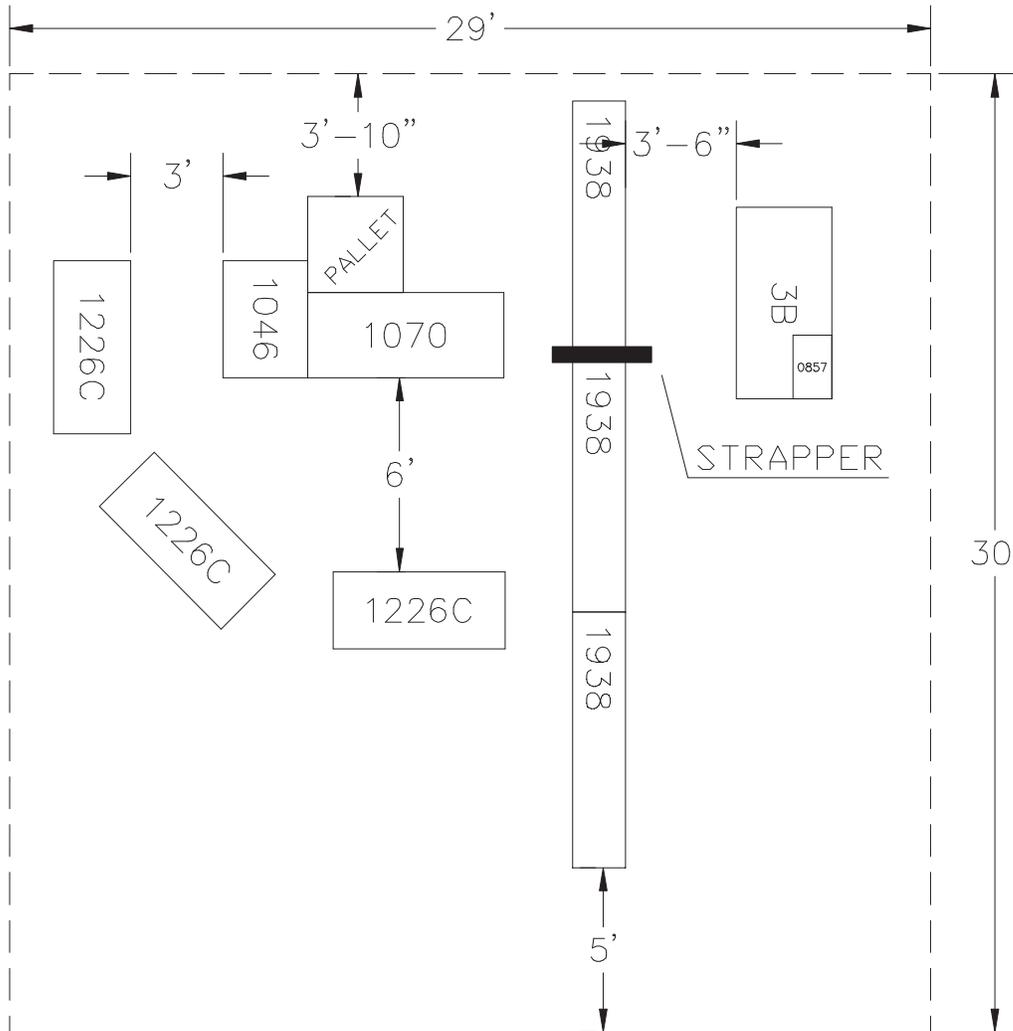


Notes:

- a. 20'-0" conveyor ahead of strapping operation for surge capacity (facilities with insufficient floor space may use a shorter conveyor).
- b. Distribution to dispatch container.
- c. Dispatch equipment staging area.

Exhibit 431m
431013, Sleeving, Weighing, and Strapping Area — Mechanized System

Date: Dec. 1994
 Distribution Letter Mail
 Scale: No Scale
 Area: 870 Sq Ft



Note: An additional sleeving and weighing operation, duplicating items, may be added here if volumes warrant.

432 **Delivery Barcode Sorters**

432.1 **Electro-Com Automation Double-Sided DBCSs**

The footprint for each of these DBCSs makes the following assumptions:

- a. Staging and dispatch of mail manually into general-purpose mail containers (GPMCs)
- b. No staging space allocated for GPMCs.

- c. Minimal maintenance access (3 ft from any panel that opens outward).
- d. Safety taken into account with minimal space design.
- e. No obstructions within workspace (including columns).
- f. Staging of empty 1226F Tray Carts at the head of the DBCS.

Exhibit 432.1a lists the WSUs currently used for the electro-com automation (ECA) double-sided DBCSs and the associated number of 1226F Tray Carts required. Exhibit 432.1b lists the space requirements for each of these WSUs. Exhibits 432.1c through 432.1k illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 432.1a

WSUs and Tray Carts Needed for ECA Double-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | 1226F Tray Carts Required FRONT | 1226F Tray Carts Required BACK | 1226F Tray Carts Required TOTAL |
|------------|------------------------|----------------|---------------------------------|--------------------------------|---------------------------------|
| 432001a | 432001A.DWG | ECA 102D | 4 | 8 | 12 |
| 432001b | 432001B.DWG | ECA 126D | 6 | 10 | 16 |
| 432001c | 432001C.DWG | ECA 150D | 8 | 12 | 20 |
| 432001d | 432001D.DWG | ECA 174D | 8 | 12 | 20 |
| 432001e | 432001E.DWG | ECA 198D | 10 | 14 | 24 |
| 432001f | 432001F.DWG | ECA 222D | 12 | 16 | 28 |
| 432001g | 432001G.DWG | ECA 246D | 12 | 16 | 28 |
| 432001h | 432001H.DWG | ECA 270D | 14 | 18 | 32 |
| 432001i | 432001I.DWG | ECA 294D | 16 | 20 | 36 |

Exhibit 432.1b

WSU Space Requirements for ECA Double-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | Minimum Space Required BEHIND DBCS | Minimum Space Required at the END of DBCS | Min. Length | Min. Width | Square Feet Required |
|------------|------------------------|----------------|------------------------------------|---|-------------|------------|----------------------|
| 432001a | 432001A.DWG | ECA 102D | 9 ft | 7 ft | 45 ft | 25 ft | 1,125 |
| 432001b | 432001B.DWG | ECA 126D | 9 ft | 7 ft | 52 ft | 25 ft | 1,300 |
| 432001c | 432001C.DWG | ECA 150D | 9 ft | 7 ft | 58 ft | 25 ft | 1,450 |
| 432001d | 432001D.DWG | ECA 174D | 9 ft | 7 ft | 63 ft | 25 ft | 1,575 |
| 432001e | 432001E.DWG | ECA 198D | 9 ft | 7 ft | 69 ft | 25 ft | 1,725 |
| 432001f | 432001F.DWG | ECA 222D | 9 ft | 7 ft | 76 ft | 25 ft | 1,900 |
| 432001g | 432001G.DWG | ECA 246D | 9 ft | 7 ft | 81 ft | 25 ft | 2,025 |
| 432001h | 432001H.DWG | ECA 270D | 9 ft | 7 ft | 87 ft | 25 ft | 2,175 |
| 432001i | 432001I.DWG | ECA 294D | 9 ft | 7 ft | 84 ft | 25 ft | 2,350 |

Exhibit 432.1e
432001c, ECA 150 Double-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,450 Sq Ft

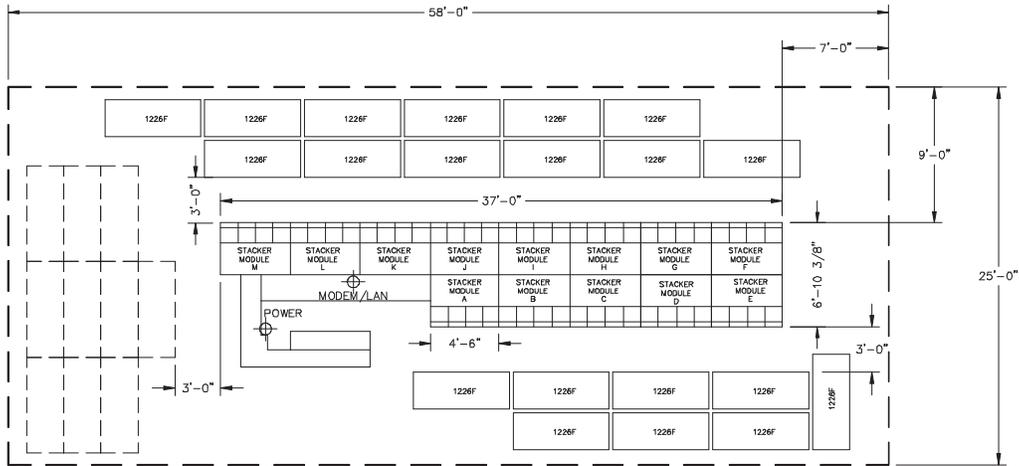


Exhibit 432.1f
432001d, ECA 174 Double-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,575 Sq Ft

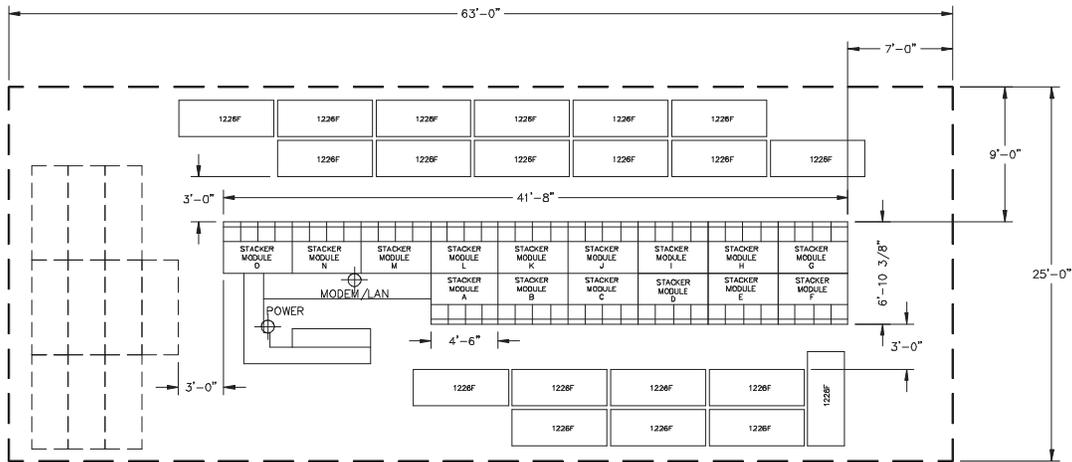


Exhibit 432.1i
432001g, ECA 246 Double-Side DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 2,025 Sq Ft

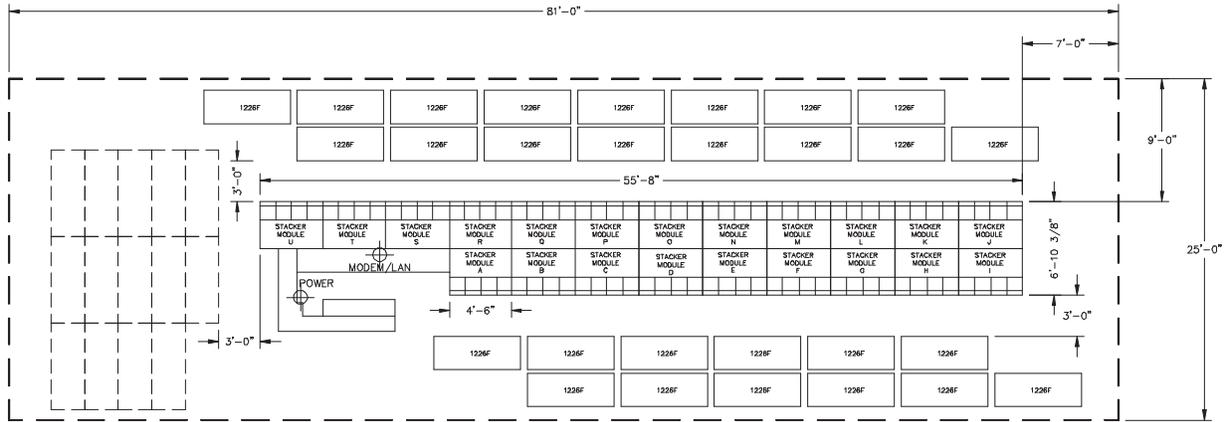


Exhibit 432.1j
432001h, ECA 270 Double-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 2,175 Sq Ft

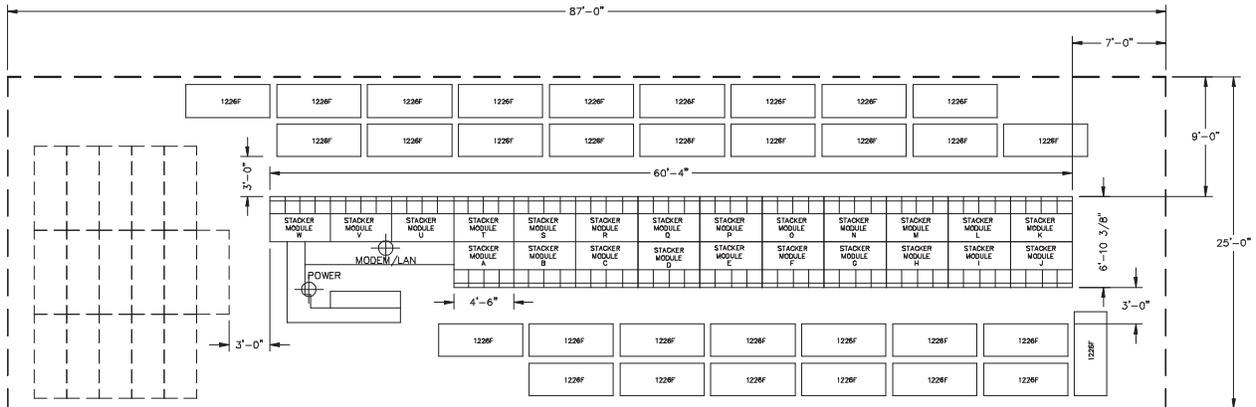
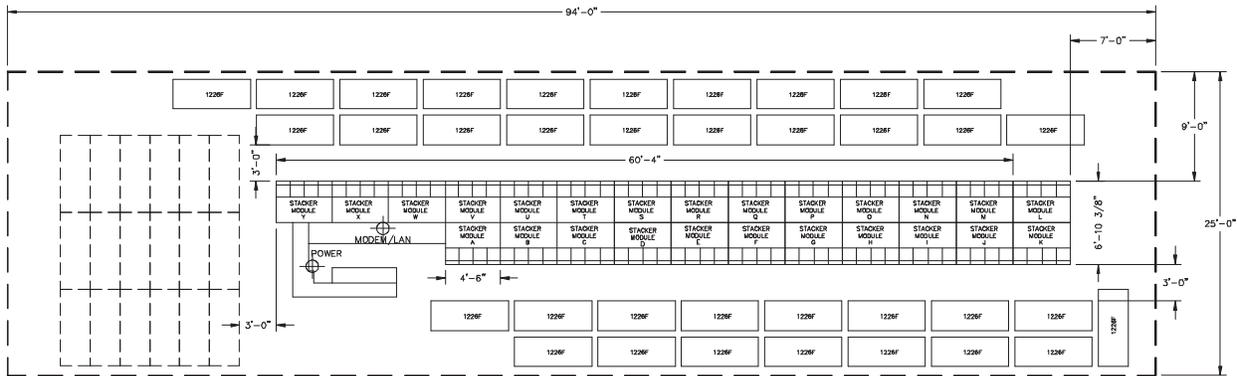


Exhibit 432.1k
432001i, ECA 294 Double-Sided DBCS

Date: Dec. 1994
 Distribution Delivery Barcode Sorter
 Scale: No Scale
 Area: 2,350 Sq Ft



432.2 **ECA Phase II Single-Sided DBCSs**

The footprint for each of these DBCSs makes the following assumptions:

- a. Staging and dispatch of mail manually (GPMCs).
- b. No staging space allocated for GPMCs.
- c. Minimal maintenance access (3 ft from any panel that opens outward).
- d. Safety taken into account with minimal space design.
- e. No obstructions within workspace (including columns).
- f. Staging of empty 1226F Tray Carts behind the DBCS.

Exhibit 432.2a lists the WSUs currently used for the ECA Phase II single-sided DBCSs and the associated number of 1226F Tray Carts required for each. Exhibit 432.2b lists the space requirements for each of these WSUs. Exhibits 432.2c through 432.2k illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 432.2a

WSUs and Tray Carts Needed for ECA Phase II Single-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | 1226F Tray Carts Required FRONT | Stored Empty 1226F Tray Carts BACK | 1226F Tray Carts Required TOTAL |
|------------|------------------------|----------------|---------------------------------|------------------------------------|---------------------------------|
| 432002a | 432002A.DWG | ECA 111 | 10 | 5 | 15 |
| 432002b | 432002B.DWG | ECA 126 | 12 | 6 | 18 |
| 432002c | 432002C.DWG | ECA 142 | 12 | 6 | 18 |
| 432002d | 432002D.DWG | ECA 158 | 14 | 7 | 21 |
| 432002e | 432002E.DWG | ECA 174 | 16 | 8 | 24 |
| 432002f | 432002F.DWG | ECA 190 | 16 | 8 | 24 |
| 432002g | 432002G.DWG | ECA 206 | 18 | 9 | 27 |
| 432002h | 432002H.DWG | ECA 222 | 20 | 10 | 30 |
| 432002i | 432002I.DWG | ECA 238 | 20 | 10 | 30 |

Exhibit 432.2b

WSU Space Requirements for ECA Phase II Single-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | Minimum Space Required BEHIND DBCS | Minimum Space Required at the END of DBCS | Min. Length | Min. Width | Square Feet Required |
|------------|------------------------|----------------|------------------------------------|---|-------------|------------|----------------------|
| 432002a | 432002A.DWG | ECA 111 | 4.5 ft | 10 ft | 60 ft | 18 ft | 1,080 |
| 432002b | 432002B.DWG | ECA 126 | 4.5 ft | 10 ft | 65 ft | 18 ft | 1,170 |
| 432002c | 432002C.DWG | ECA 142 | 4.5 ft | 10 ft | 69 ft | 18 ft | 1,242 |
| 432002d | 432002D.DWG | ECA 158 | 4.5 ft | 10 ft | 74 ft | 18 ft | 1,332 |
| 432002e | 432002E.DWG | ECA 174 | 4.5 ft | 10 ft | 78 ft | 18 ft | 1,404 |
| 432002f | 432002F.DWG | ECA 190 | 4.5 ft | 10 ft | 83 ft | 18 ft | 1,494 |
| 432002g | 432002G.DWG | ECA 206 | 4.5 ft | 10 ft | 87 ft | 18 ft | 1,566 |
| 432002h | 432002H.DWG | ECA 222 | 4.5 ft | 10 ft | 92 ft | 18 ft | 1,656 |
| 432002i | 432002I.DWG | ECA 238 | 4.5 ft | 10 ft | 96 ft | 18 ft | 1,728 |

Exhibit 432.2c
432002a, ECA 111 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,080 Sq Ft

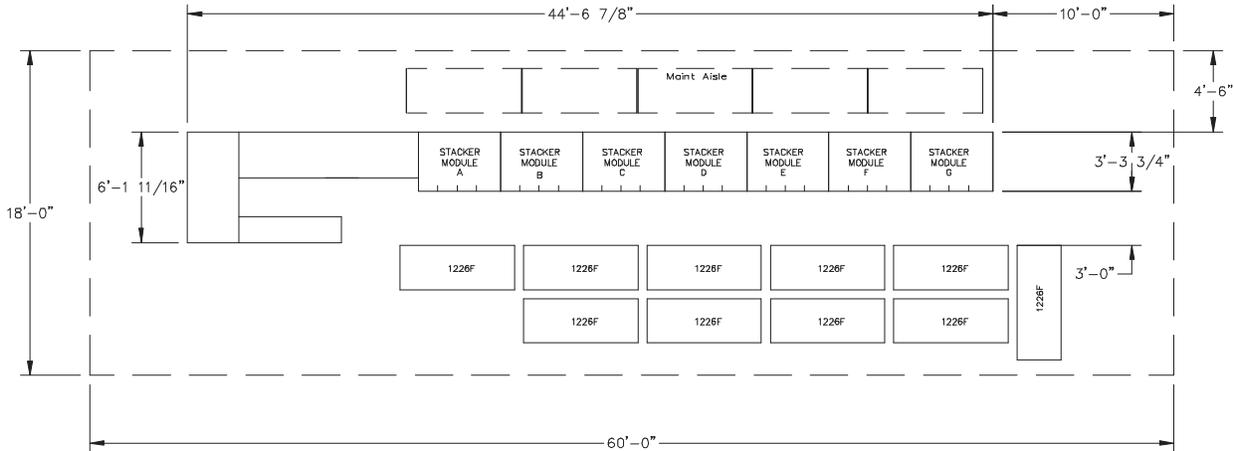


Exhibit 432.2d
432002b, ECA 126 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,170 Sq Ft

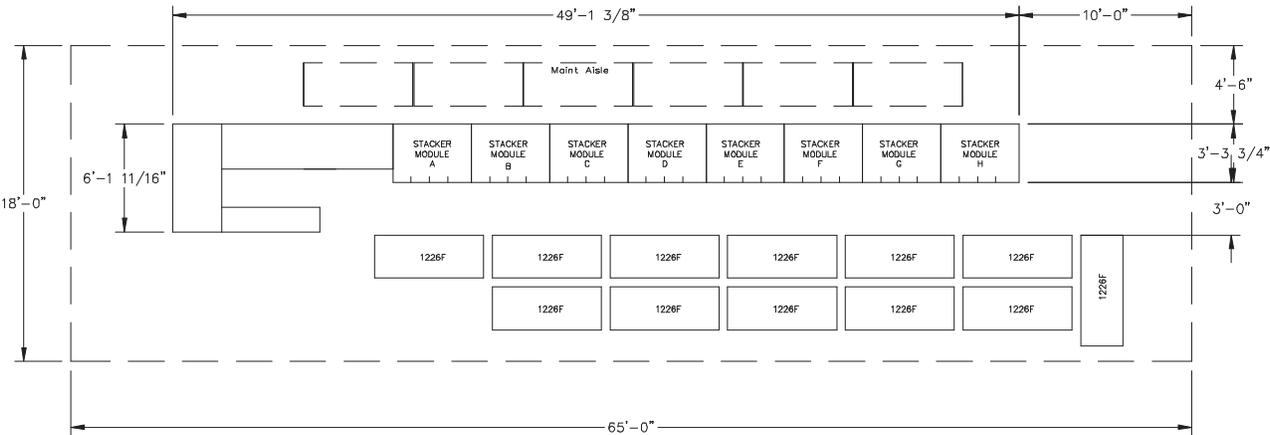


Exhibit 432.2e
432002c, ECA 142 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,242 Sq Ft

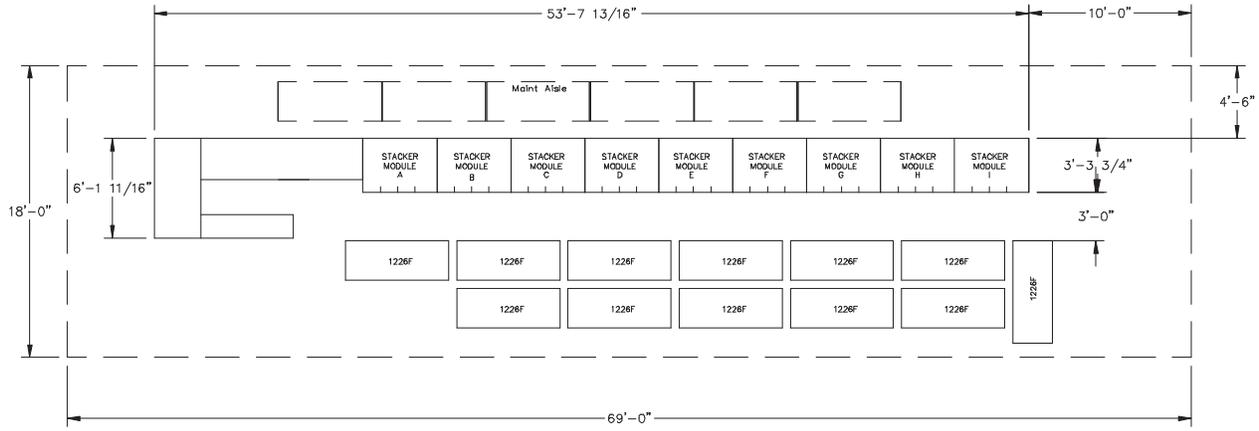


Exhibit 432.2f
432002d, ECA 158 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,332 Sq Ft

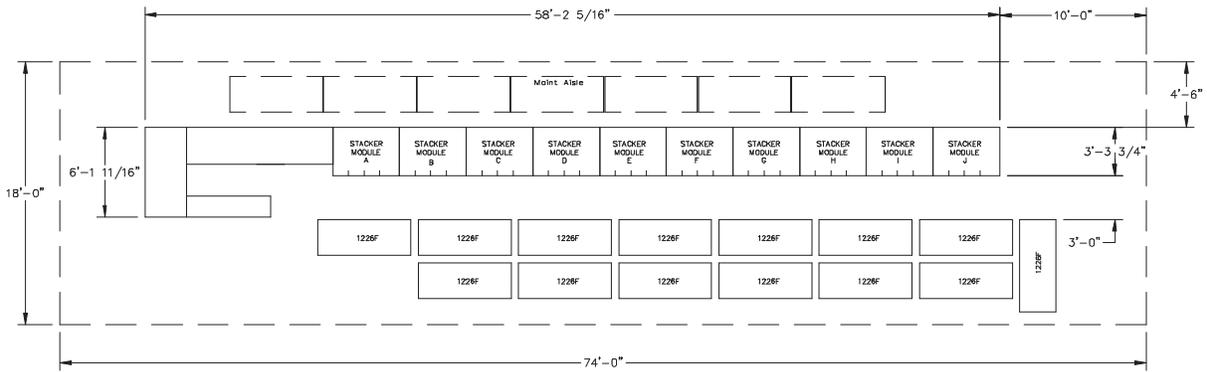


Exhibit 432.2g
432002e, ECA 174 Phase II Single-Sided DBCS

Date: Dec. 1994
 Distribution Delivery Barcode Sorter
 Scale: No Scale
 Area: 1,404 Sq Ft

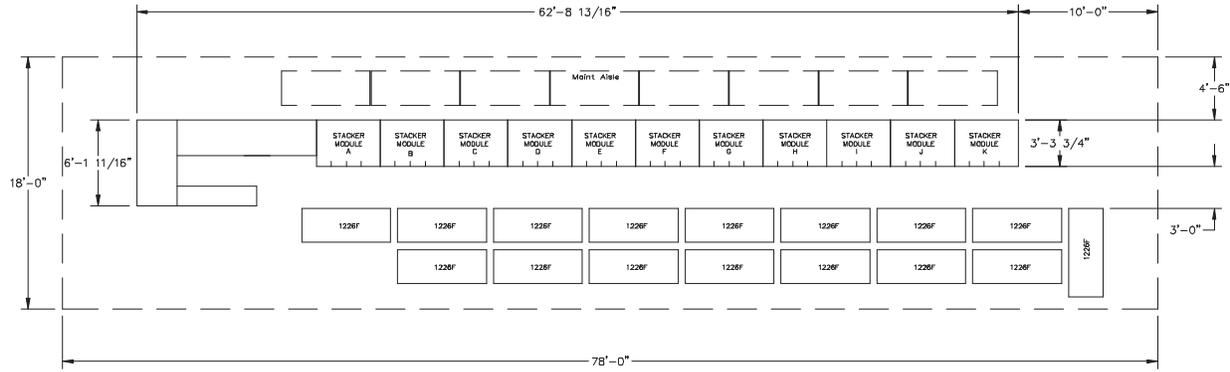


Exhibit 432.2h
432002f, ECA 190 Phase II Single-Sided DBCS

Date: Dec. 1994
 Distribution Delivery Barcode Sorter
 Scale: No Scale
 Area: 1,494 Sq Ft

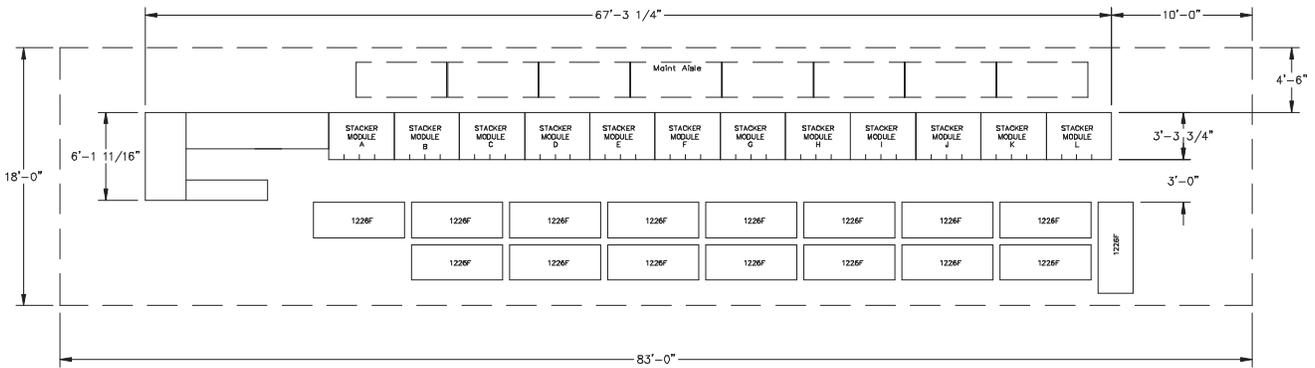


Exhibit 432.2i
432002g, ECA 206 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,566 Sq Ft

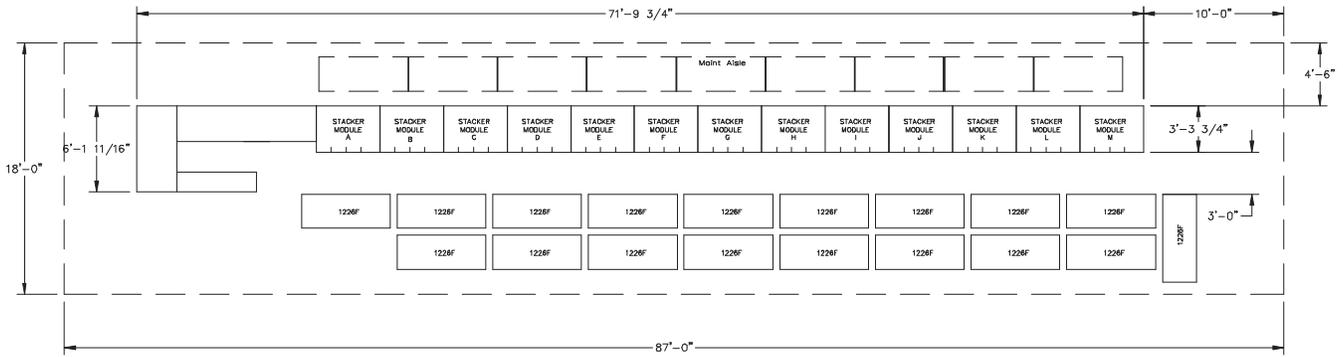


Exhibit 432.2j
432002h, ECA 222 Phase II Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,656 Sq Ft

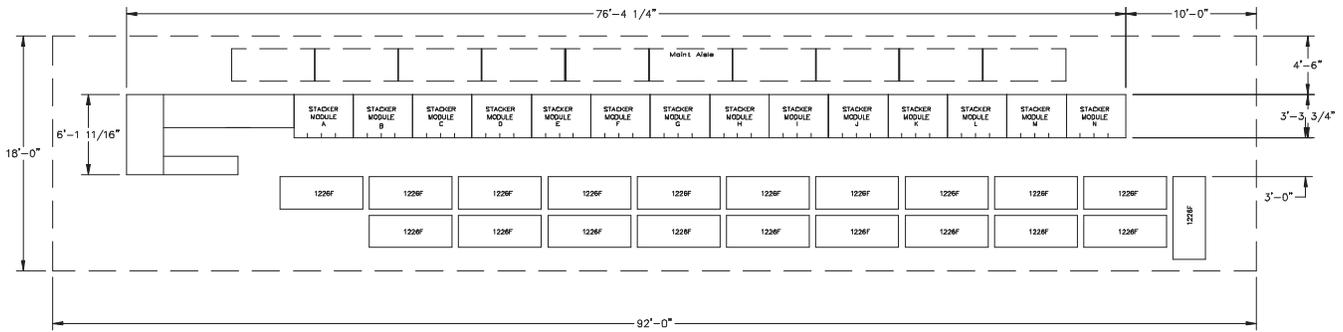
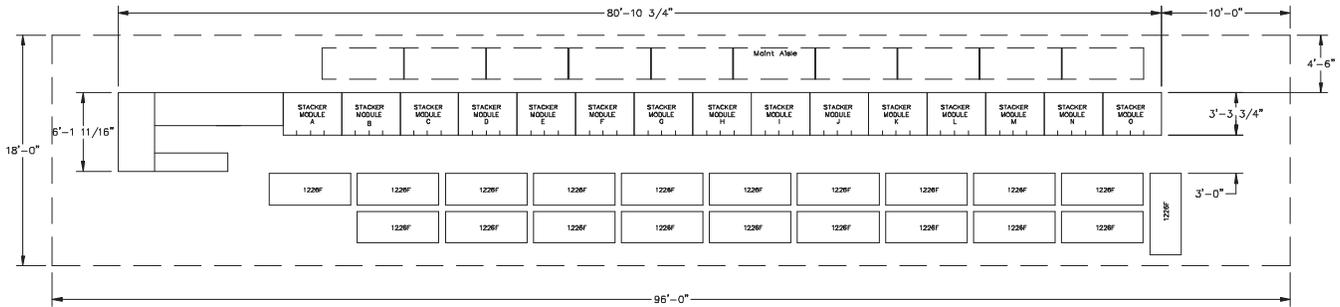


Exhibit 432.2k
432002i, ECA 238 Phase II Single-Sided DBCS

Date: Dec. 1994
 Distribution Delivery Barcode Sorter
 Scale: No Scale
 Area: 1,728 Sq Ft



432.3 **Martin Marietta Single-Sided DBCSs**

The footprint for each of these DBCSs makes the following assumptions:

- Staging and dispatch of mail manually (GPMCs).
- No staging space allocated for GPMCs.
- Minimal maintenance access (3 ft from any panel that opens outward).
- Safety taken into account with minimal space design.
- No obstructions within workspace (including columns).
- Staging of empty 1226F Tray Carts behind the DBCS.

Exhibit 432.3a lists the WSUs currently used for the Martin Marietta single-sided DBCSs and the associated number of 1226F Tray Carts required for each. Exhibit 432.3b lists the space requirements for each of these WSUs. Exhibits 432.3c through 432.3k illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 432.3a

WSUs and Tray Carts Needed for Martin Marietta Single-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | 1226F Tray Carts Required FRONT | Stored Empty 1226F Tray Carts BACK | 1226F Tray Carts Required TOTAL |
|------------|------------------------|----------------|---------------------------------|------------------------------------|---------------------------------|
| 432003a | 432003A.DWG | MM 100 | 10 | 5 | 15 |
| 432003b | 432003B.DWG | MM 120 | 10 | 5 | 15 |
| 432003c | 432003C.DWG | MM 140 | 12 | 6 | 18 |
| 432003d | 432003D.DWG | MM 160 | 14 | 7 | 21 |
| 432003e | 432003E.DWG | MM 180 | 16 | 8 | 24 |
| 432003f | 432003F.DWG | MM 200 | 18 | 9 | 27 |
| 432003g | 432003G.DWG | MM 220 | 20 | 10 | 30 |
| 432003h | 432003H.DWG | MM 240 | 20 | 10 | 30 |
| 432003i | 432003I.DWG | MM 260 | 22 | 11 | 33 |

Exhibit 432.3b

WSU Space Requirements for Martin Marietta Single-Sided DBCSs

| WSU Number | PostalCAD Drawing Name | Equipment Name | Minimum Space Required BEHIND DBCS | Minimum Space Required at the END of DBCS | Min. Length | Min. Width | Square Feet Required |
|------------|------------------------|----------------|------------------------------------|---|-------------|------------|----------------------|
| 432003a | 432003A.DWG | MM 100 | 4.5 ft | 10 ft | 47 ft | 18 ft | 847 |
| 432003b | 432003B.DWG | MM 120 | 4.5 ft | 10 ft | 53 ft | 18 ft | 954 |
| 432003c | 432003C.DWG | MM 140 | 4.5 ft | 10 ft | 58 ft | 18 ft | 1,044 |
| 432003d | 432003D.DWG | MM 160 | 4.5 ft | 10 ft | 63 ft | 18 ft | 1,134 |
| 432003e | 432003E.DWG | MM 180 | 4.5 ft | 10 ft | 69 ft | 18 ft | 1,242 |
| 432003f | 432003F.DWG | MM 200 | 4.5 ft | 10 ft | 74 ft | 18 ft | 1,332 |
| 432003g | 432003G.DWG | MM 220 | 4.5 ft | 10 ft | 79 ft | 18 ft | 1,422 |
| 432003h | 432003H.DWG | MM 240 | 4.5 ft | 10 ft | 84 ft | 18 ft | 1,512 |
| 432003i | 432003I.DWG | MM 260 | 4.5 ft | 10 ft | 90 ft | 18 ft | 1,620 |

Exhibit 432.3c
432003a, Martin Marietta 100 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 846 Sq Ft

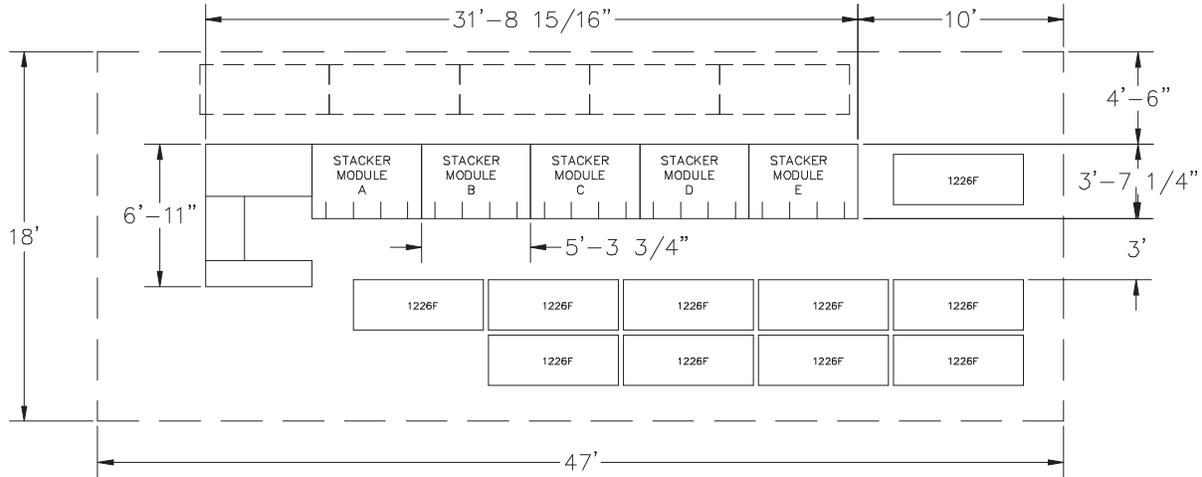


Exhibit 432.3d
432003b, Martin Marietta 120 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 954 Sq Ft

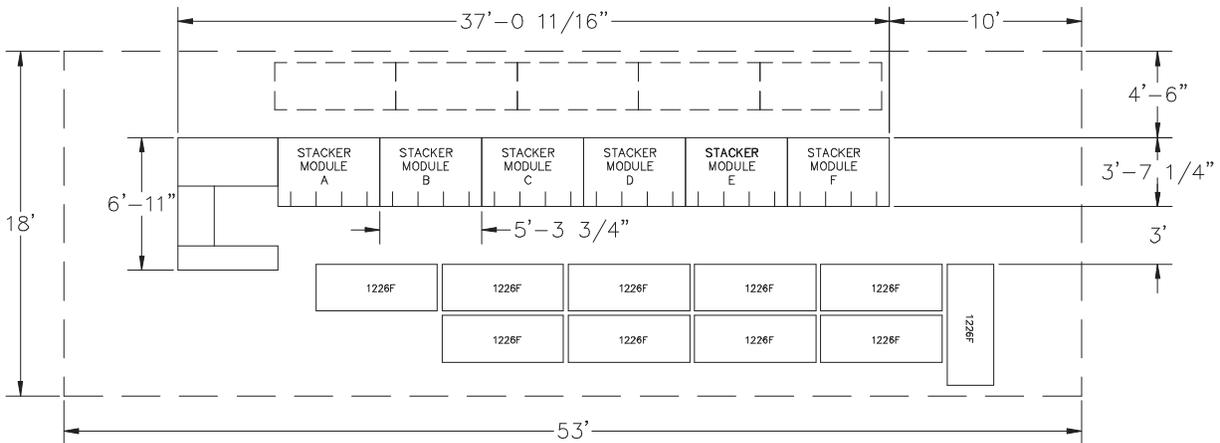


Exhibit 432.3e
432003c, Martin Marietta 140 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,044 Sq Ft

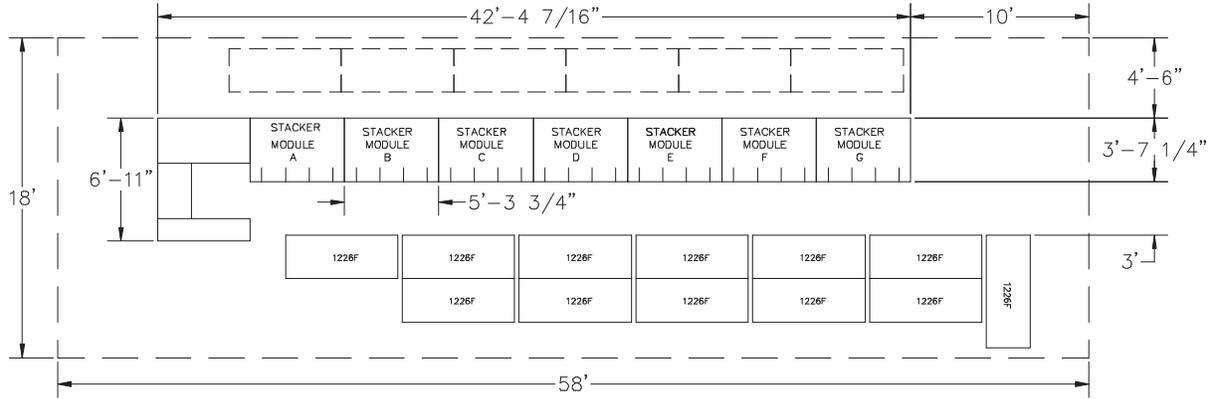


Exhibit 432.3f
432003d, Martin Marietta 160 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,134 Sq Ft

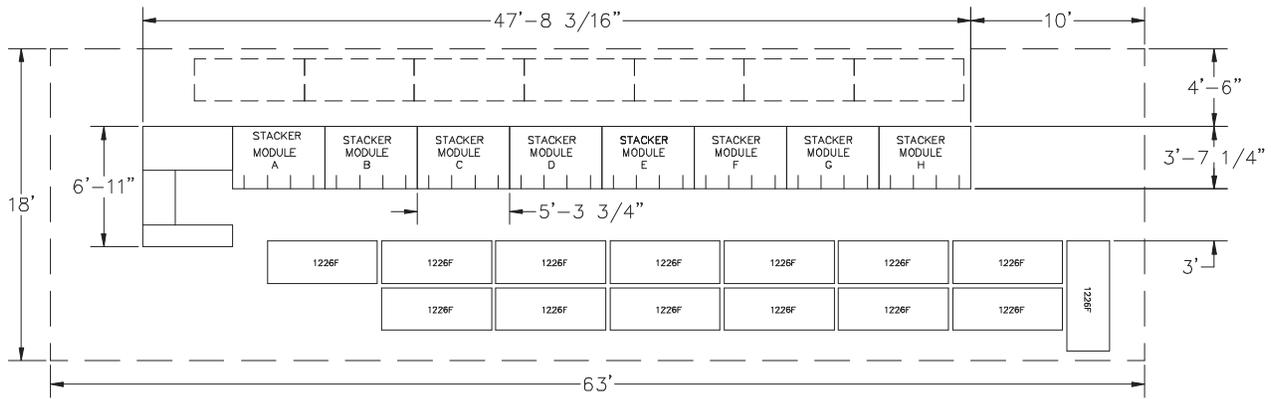


Exhibit 432.3g
432003e, Martin Marietta 180 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,242 Sq Ft

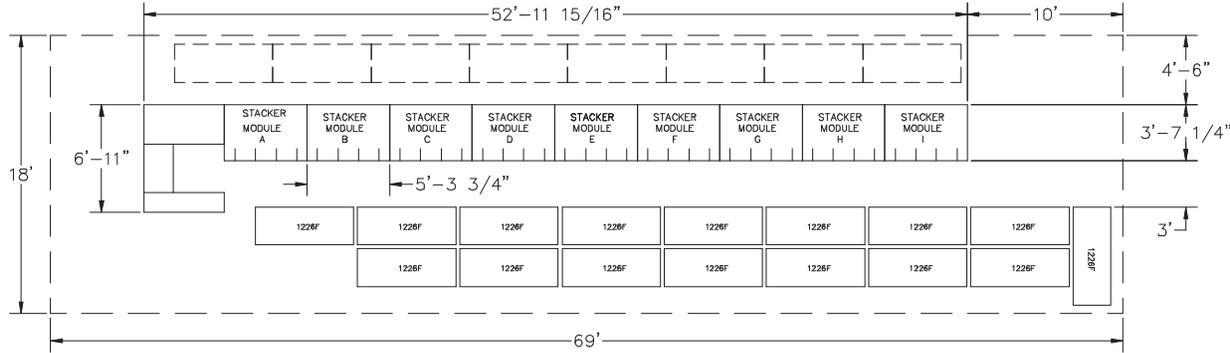


Exhibit 432.3h
432003f, Martin Marietta 200 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,332 Sq Ft

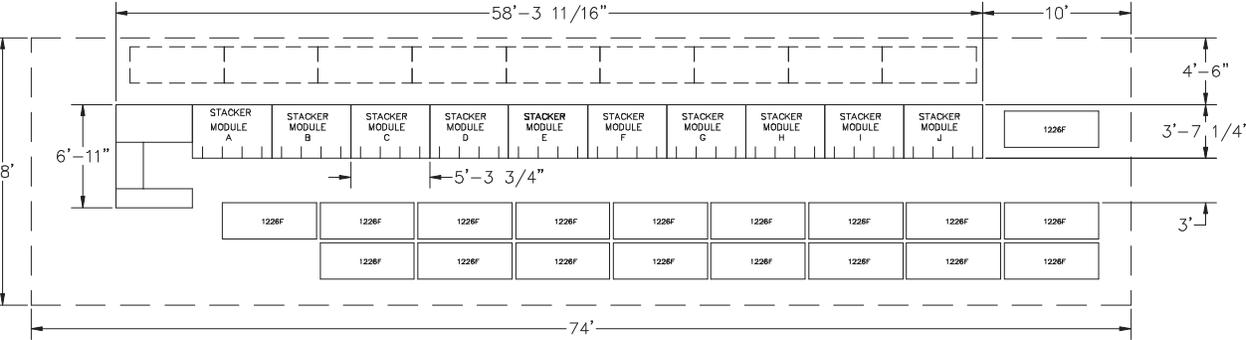


Exhibit 432.3i
432003g, Martin Marietta 220 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,422 Sq Ft

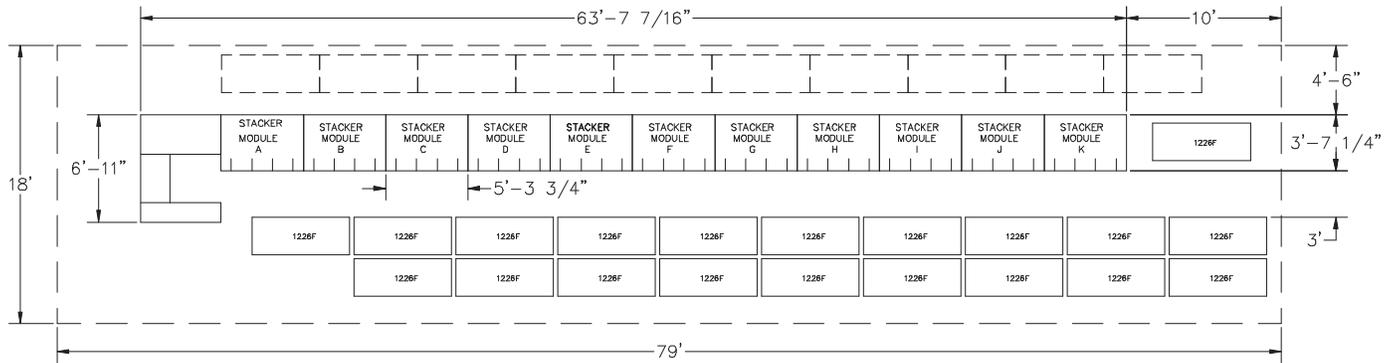


Exhibit 432.3j
432003h, Martin Marietta 240 Single-Sided DBCS

Date: Dec. 1994
Distribution Delivery Barcode Sorter
Scale: No Scale
Area: 1,512 Sq Ft

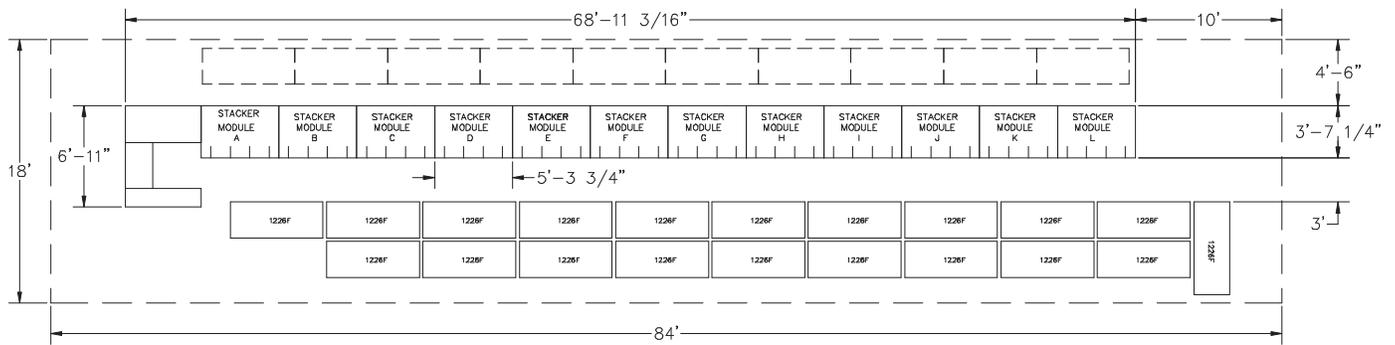
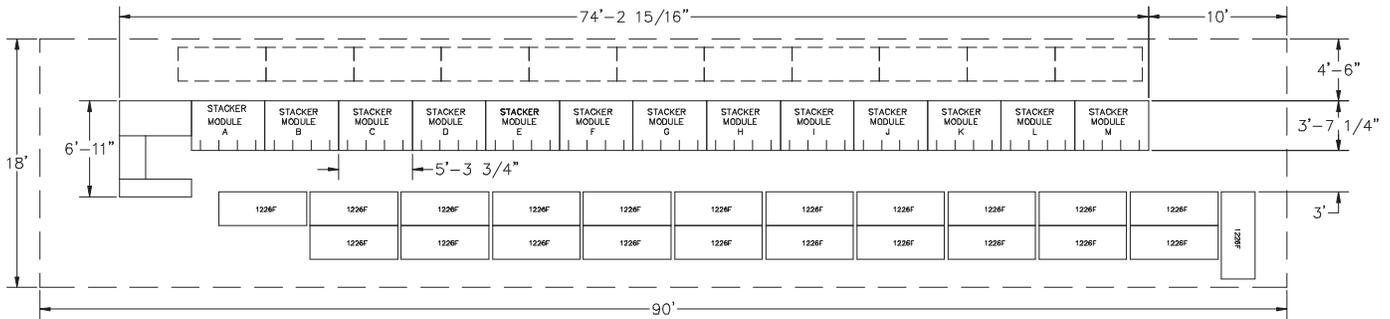


Exhibit 432.3k

432003i, Martin Marietta 260 Single-Sided DBCS

Date: Dec. 1994
 Distribution Delivery Barcode Sorter
 Scale: No Scale
 Area: 1,620 Sq Ft



432.4 ECA Phase IV Single-Sided DBCS/Optical Character Reader

The footprint for each of these DBCSs makes the following assumptions:

- a. Staging and dispatch of mail manually (GPMCs).
- b. No staging space allocated for GPMCs.
- c. Minimal maintenance access (3 ft from any panel that opens outward).
- d. Safety taken into account with minimal space design.
- e. No obstructions within workspace (including columns).
- f. Staging of empty 1226F Tray Carts behind the DBCS/optical character reader (OCR).

Exhibit 432.4a lists the WSUs currently used for the ECA Phase IV single-sided DBCS/OCRs and the associated number of 1226F Tray Carts required for each. Exhibit 432.4b lists the space requirements for each of these WSUs. Exhibits 432.4c through 432.4f illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 432.4a

WSUs and Tray Carts Needed for ECA Phase IV Single-Sided DBCS/OCRs

| WSU Number | PostalCAD Drawing Name | Equipment Name | 1226F Tray Carts Required FRONT | Stored Empty 1226F Tray Carts BACK | 1226F Tray Carts Required TOTAL |
|------------|------------------------|----------------|---------------------------------|------------------------------------|---------------------------------|
| 432012e | 432012E.DWG | OCR 174 | 16 | 8 | 24 |
| 432012f | 432012F.DWG | OCR 190 | 18 | 9 | 27 |
| 432012g | 432012G.DWG | OCR 206 | 20 | 10 | 30 |
| 432012i | 432012I.DWG | OCR 238 | 22 | 11 | 33 |

Exhibit 432.4b

WSU Space Requirements for ECA Phase IV Single-Sided DBCS/OCRs

| WSU Number | PostalCAD Drawing Name | Equipment Name | Minimum Space Required BEHIND DBCS | Minimum Space Required at the END of DBCS | Min. Length | Min. Width | Square Feet Required |
|------------|------------------------|----------------|------------------------------------|---|-------------|------------|----------------------|
| 432012e | 432012E.DWG | OCR 174 | 4.5 ft | 10 ft | 83 ft | 18 ft | 1,494 |
| 432012f | 432012F.DWG | OCR 190 | 4.5 ft | 10 ft | 88 ft | 18 ft | 1,584 |
| 432012g | 432012G.DWG | OCR 206 | 4.5 ft | 10 ft | 92 ft | 18 ft | 1,656 |
| 432012i | 432012I.DWG | OCR 238 | 4.5 ft | 10 ft | 101 ft | 18 ft | 1,818 |

Exhibit 432.4c

432012e, ECA Phase IV 174 Single-Sided DBCS/OCR

Date: May 1997
 Distribution Delivery Barcode Sorter — OCR
 Scale: No Scale
 Area: 1,494 Sq Ft

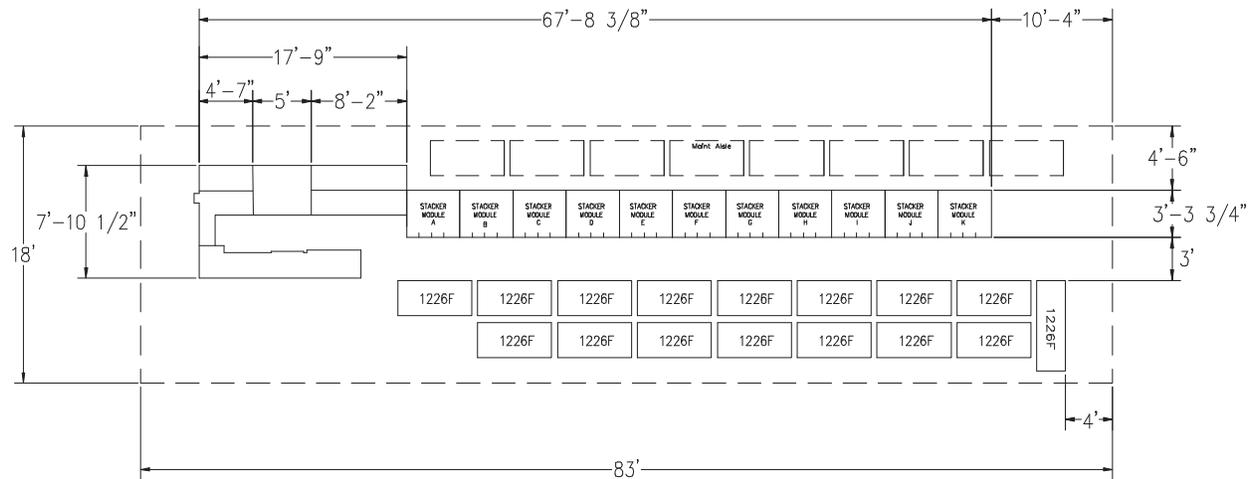


Exhibit 432.4d
432012f, ECA Phase IV 190 Single-Sided DBCS/OCR

Date: May 1997
Distribution Delivery Barcode Sorter — OCR
Scale: No Scale
Area: 1,584 Sq Ft

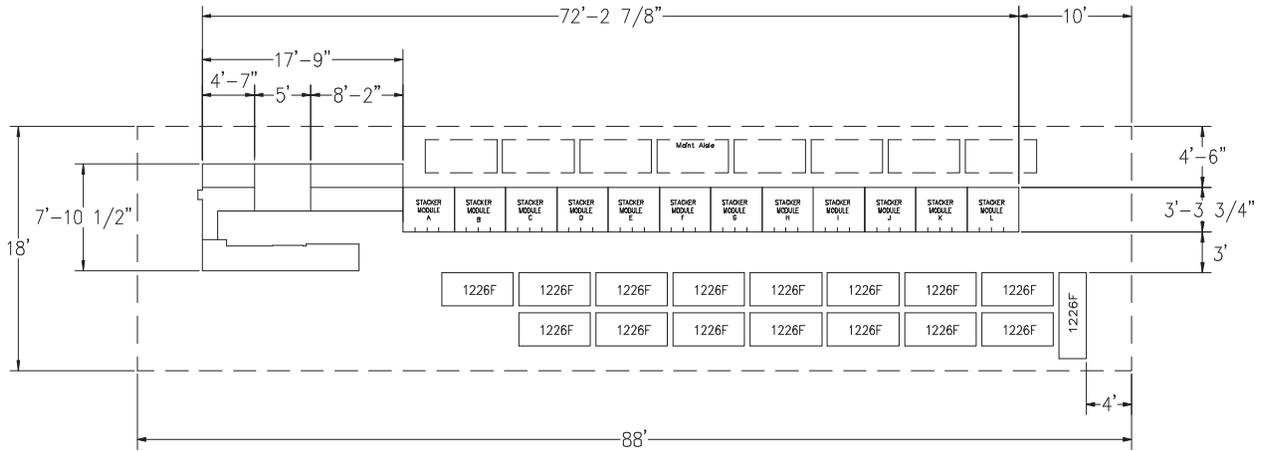


Exhibit 432.4e
432012g, ECA Phase IV 206 Single-Sided DBCS/OCR

Date: May 1997
Distribution Delivery Barcode Sorter — OCR
Scale: No Scale
Area: 1,656 Sq Ft

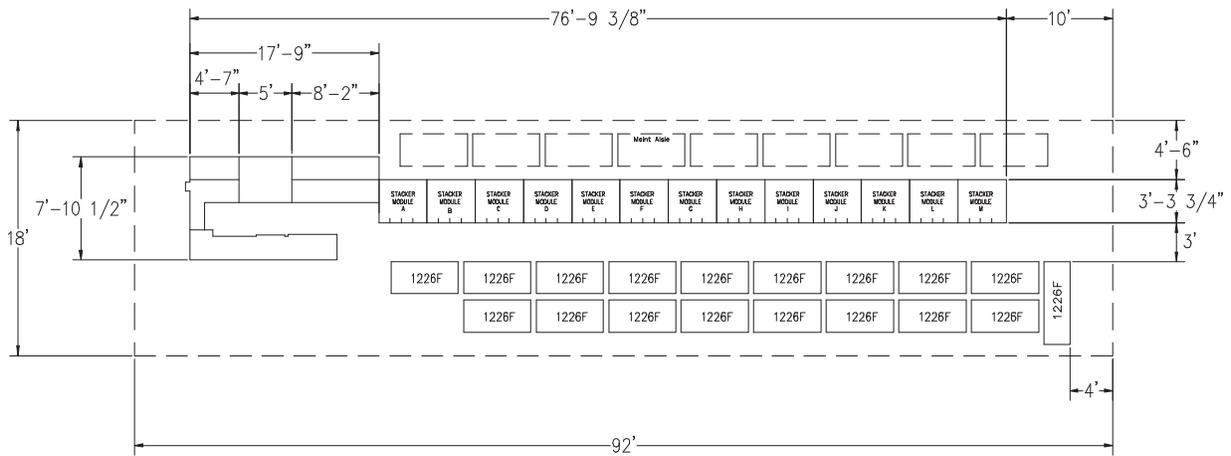
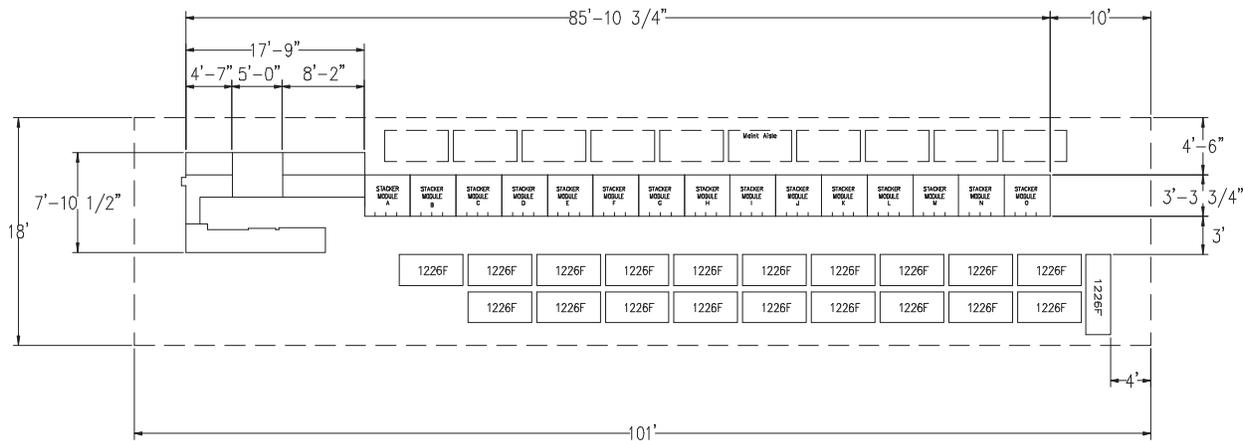


Exhibit 432.4f
432012i, ECA Phase IV 238 Single-Sided DBCS/OCR

Date: Jan. 1998
 Distribution Delivery Barcode Sorter — OCR
 Scale: No Scale
 Area: 1,818 Sq Ft



433 **Pouching and Sacking**

Exhibit 433a lists the WSUs currently used for pouching and sacking. Exhibits 433b through 433i illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 433a
WSUs Used for Pouching and Sacking

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Arrangement | Item Numbers and Description |
|------------|------------------------|----------------------|-----------------------------------|---|
| 433001 | 433001.DWG | 18 | Single rack | 61A, Loose Pack Rack — 2 Separations |
| 433001a | 433001A.DWG | 32 | Single rack | 61B, Loose Pack Rack — 4 Separations |
| 433002 | 433002.DWG | 23 | Single rack | 30, 2 Pouch Racks — 5 Separations Each |
| 433002a | 433002A.DWG | 46 | Single rack | 31A or 31B, 2 Pouch Racks — 10 Separations Each |
| 433003 | 433003.DWG | 187 | Double depth | 2-31A, 2-31B, 8B, 4 Pouch Racks — 10 Separations Each With Canceling Table |
| 433004a | 433004A.DWG | 412 | U-shape | 3-31A, 3-31B, 8B, 6 Pouch Racks — 10 Separations Each With Canceling Table |
| 433004b | 433004B.DWG | 412 | 2 rows deep | 4-31A, 4-31B, 8B, 8 Pouch Racks — 10 Separations Each With Canceling Table |
| 433004c | 433004C.DWG | 530 | Double depth | 5-31A, 5-31B, 8B, 10 Pouch Racks — 10 Separations Each With Canceling Table |
| 433004d | 433004D.DWG | 530 | Double depth | 6-31A, 6-31B, 8B, 12 Pouch Racks — 10 Separations Each With Canceling Table |
| 433005 | 433005.DWG | 711 | Double depth, with 17-ft conveyor | 5-31A, 5-31B, 3-1070, 1922A Conveyor, 10 Pouch Racks — 10 Separations Each With 17-Ft Conveyor and 3 Nutting Trucks |
| 433006 | 433006.DWG | 878 | Double depth, with 25-ft conveyor | 7-31A, 7-31B, 3-1070, 1922 Conveyor, 14 Pouch Racks — 10 Separations Each With 25-Ft Conveyor and 3 Nutting Trucks |

Exhibit 433b
433001, Loose Pack Rack — 2 Separations

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 18 Sq Ft

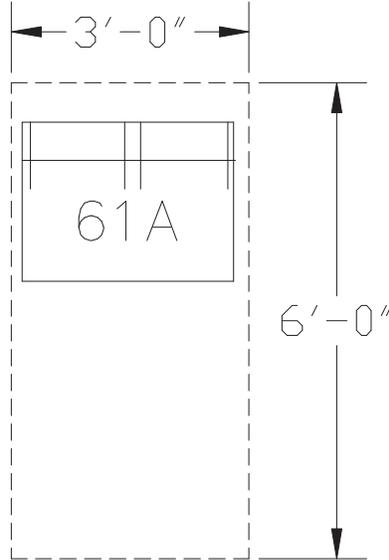


Exhibit 433c
433001a, Loose Pack Rack — 4 Separations

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 32 Sq Ft

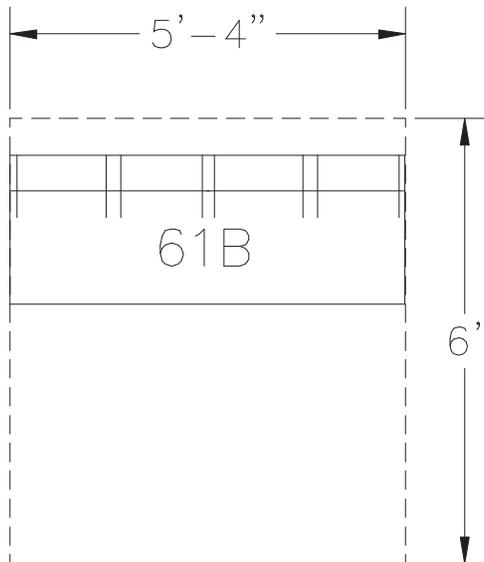


Exhibit 433d
433002, 2 Pouch Racks — 5 Separations Each

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 35 Sq Ft

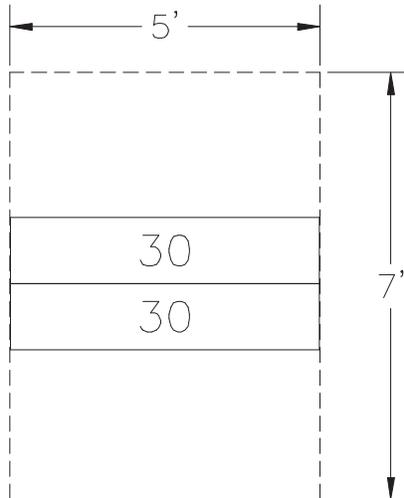


Exhibit 433e
433002a, 2 Pouch Racks — 10 Separations Each

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 46 Sq Ft

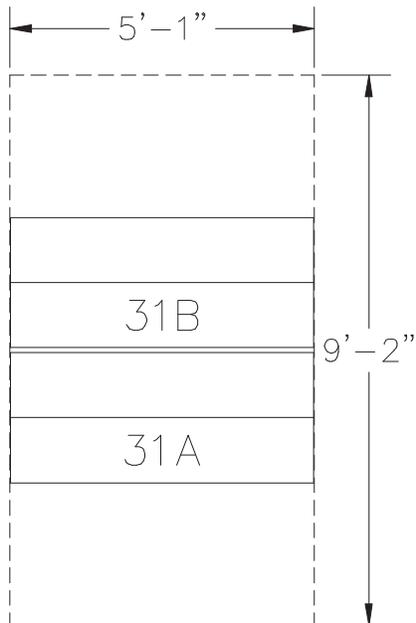


Exhibit 433f
433003, 4 Pouch Racks — 10 Separations Each, With Canceling Table

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 187 Sq Ft

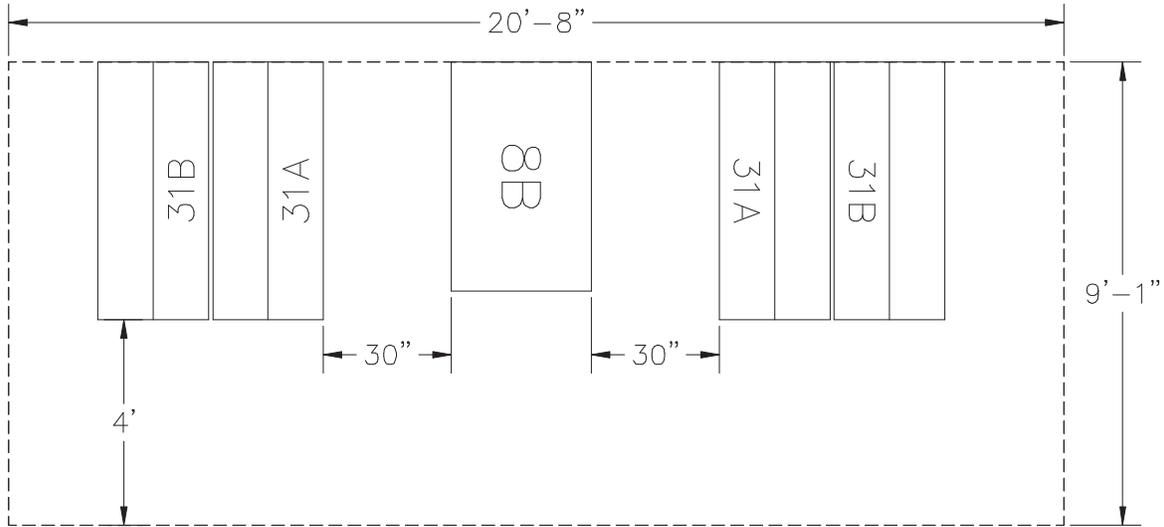


Exhibit 433g
433004a, 6 Pouch Racks — 10 Separations Each, With Canceling Table

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 412 Sq Ft

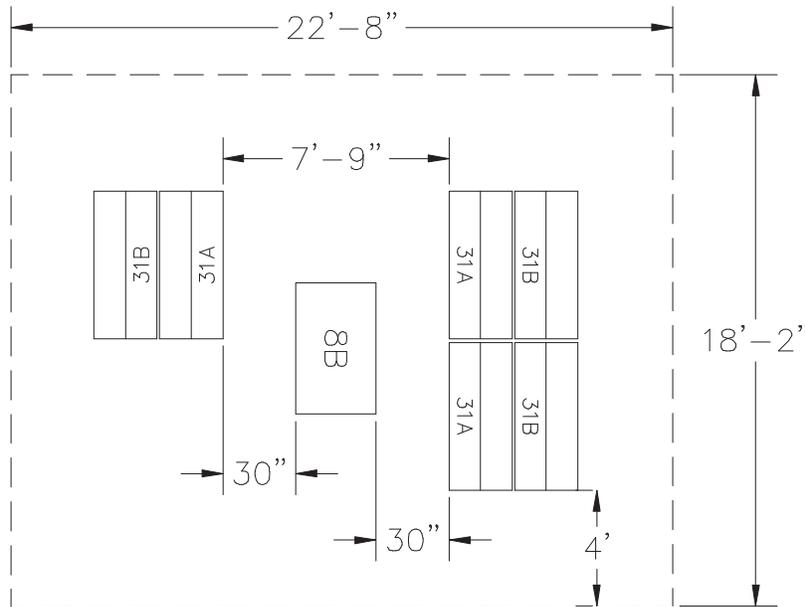


Exhibit 433h
433004b, 8 Pouch Racks — 10 Separations Each, With Canceling Table

Date: Dec. 1994
Pouching, Sacking
Scale: No Scale
Area: 412 Sq Ft

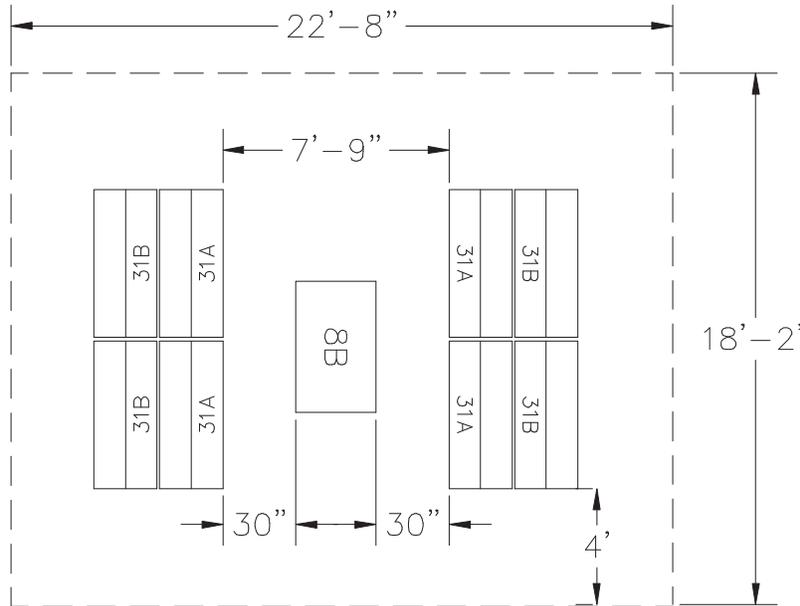


Exhibit 433i
433004c, 10 Pouch Racks — 10 Separations Each, With Canceling Table

Date: Dec. 1994
Pouching, Sacking
Scale: No Scale
Area: 530 Sq Ft

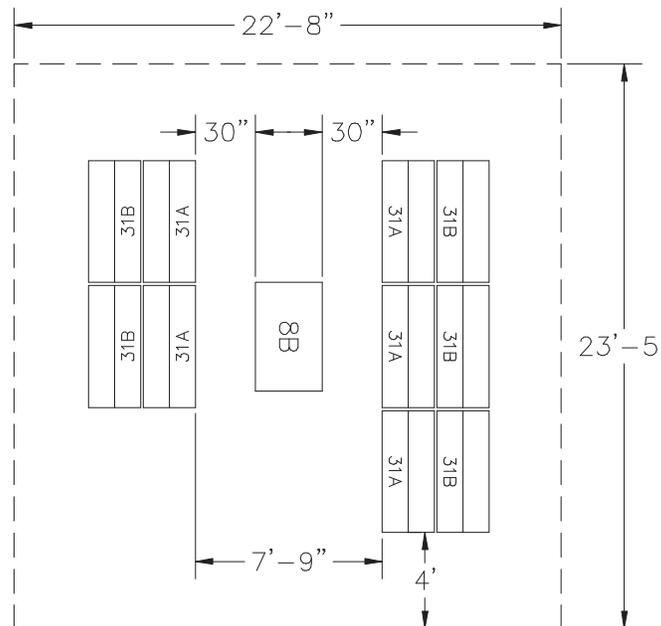


Exhibit 433j
433004d, 12 Pouch Racks — 10 Separations Each, With Canceling Table

Date: Dec. 1994
Pouching, Sacking
Scale: No Scale
Area: 530 Sq Ft

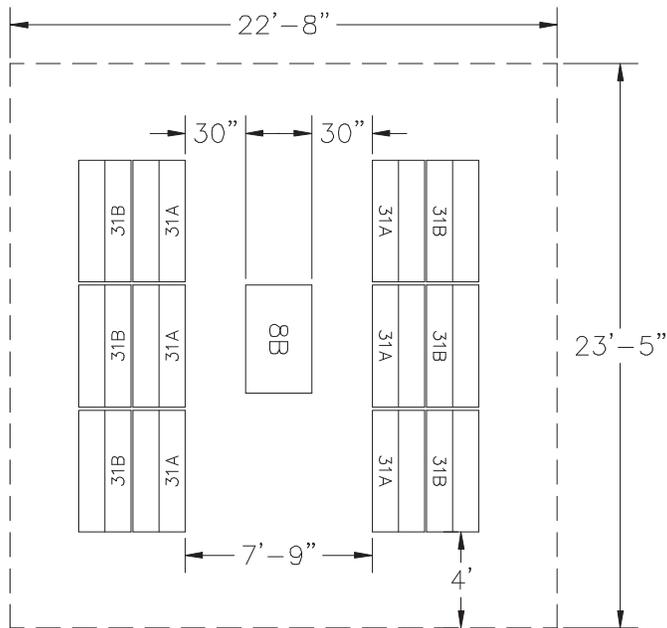


Exhibit 433k
433005, 10 Pouch Racks — 10 Separations Each, With 17-Ft 1922A Conveyor and 3 Nutting Trucks

Date: Dec. 1994
Pouching, Sacking
Scale: No Scale
Area: 711 Sq Ft

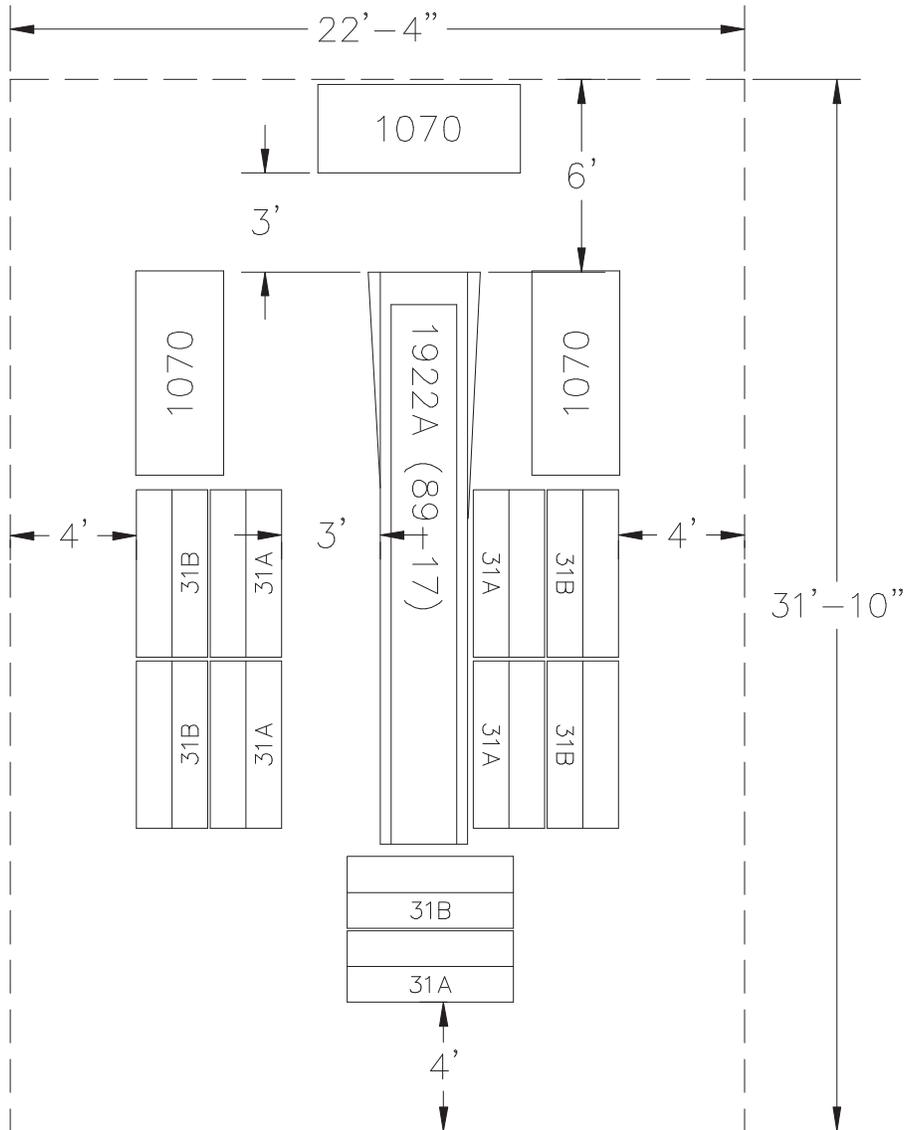
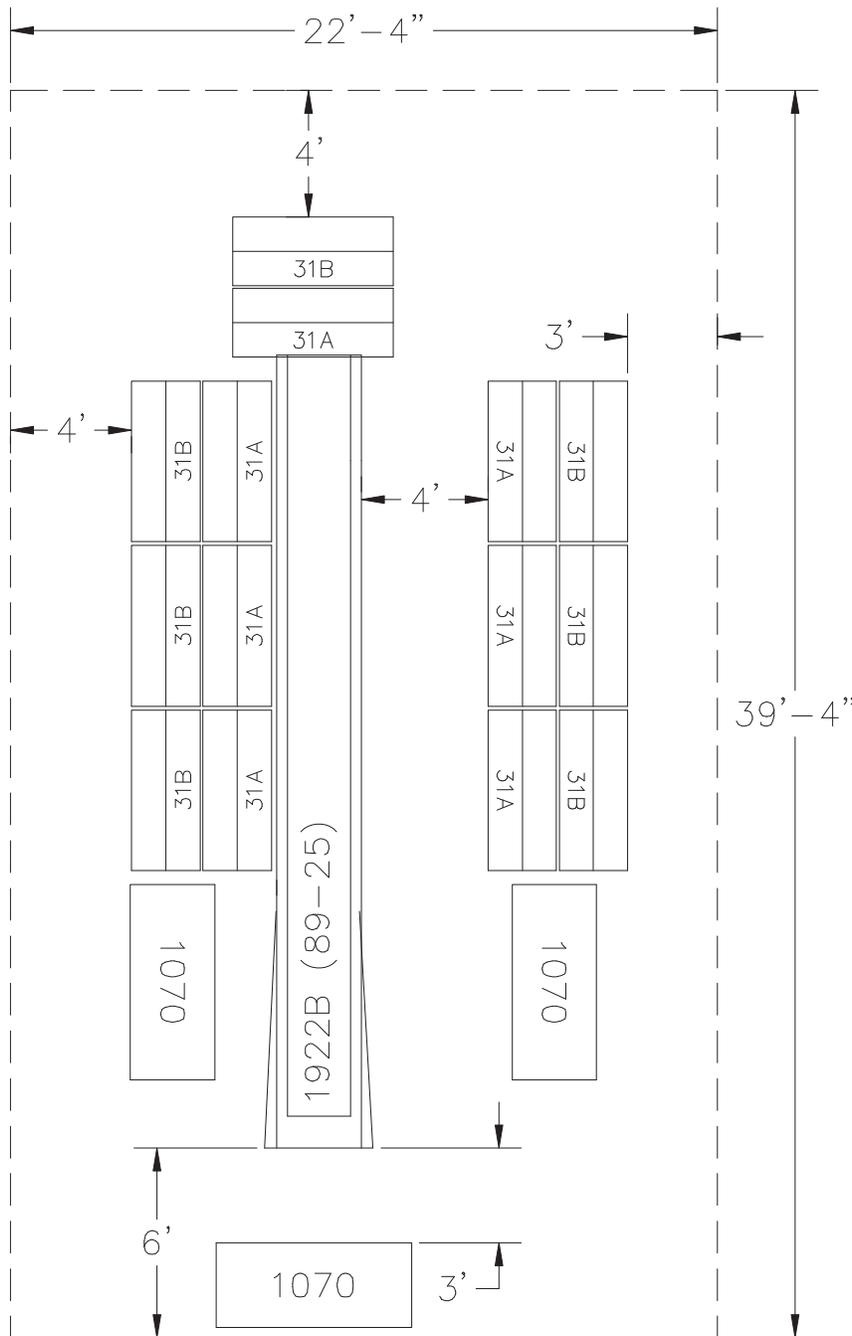


Exhibit 433I
433006, 14 Pouch Racks — 10 Separations Each, With 25-Ft 1922B Conveyor and 3 Nutting Trucks

Date: Dec. 1994
 Pouching, Sacking
 Scale: No Scale
 Area: 878 Sq Ft



434 **Reserved**435 **Flat Mail — Manual Cases and Mechanized Sorting Machines**

The footprints of these WSUs provide for movement of mail and personnel within the work center, exclusive of dedicated aisles, and an allowance for column interference and other unusable space. Exhibit 435a lists the WSUs currently used for flat mail — manual cases and mechanical sorting machines. Exhibits 435b through 435j illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 435a

WSUs Used for Flat Mail — Manual Cases and Mechanized Sorting Machines

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Separations | Description |
|-------------------|-------------------------------|-----------------------------|--------------------|---------------------------------------|
| 435001 | 435001.DWG | 150 | 60 | Flat Workstation — Open Back |
| 435002a | 435002A.DWG | 40 | 24–30 | Flat Workstation — Open Back |
| 435002b | 435002B.DWG | 56 | 36–42 | Flat Workstation — Open Back |
| 435003a | 435003A.DWG | 40 | 18 | Flat Distribution Setup |
| 435003b | 435003B.DWG | 80 | 19–36 | Flat Distribution Setup |
| 435003c | 435003C.DWG | 110 | 37–54 | Flat Distribution Setup |
| 435003d | 435003D.DWG | 130 | 55–72 | Flat Distribution Setup |
| 435008 | 435008.DWG | 2,500 | 100 | Flat Sorting Machine (FSM): 2+2 Model |
| 435009 | 435009.DWG | 3,093 | 100 | Flat Sorting Machine (FSM-1000) |

Exhibit 435b

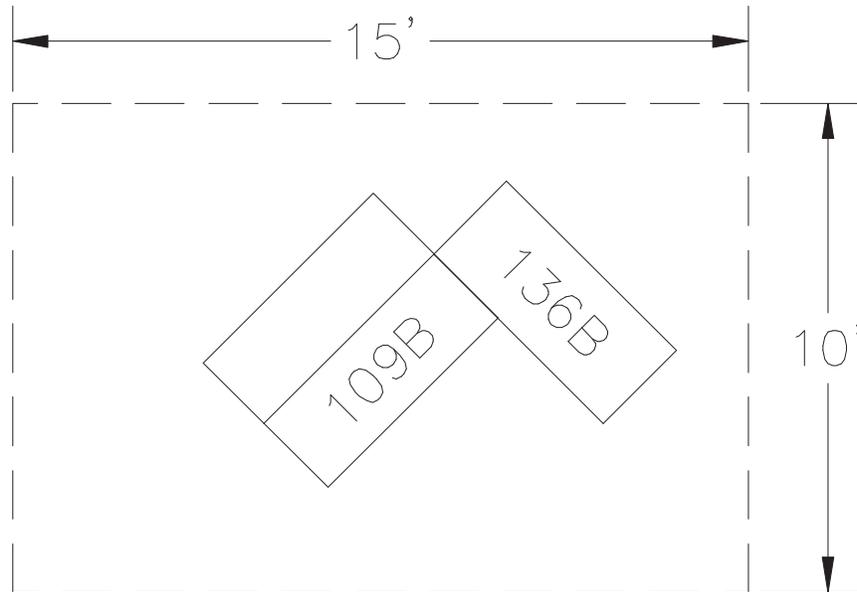
435001, Flat Workstation — Open Back: 60 Separations

Date: Dec. 1994

Distribution Flat Mail

Scale: No Scale

Area: 150 Sq Ft



Note: The planning area of 150 sq ft allows for:

- a. A maximum of 21'-4" back-to-back of cases.
- b. A maximum of 12'-5" from the back of case (toward distribution side) to a dedicated aisle, wall, or adjacent work area.
- c. A 3'-6" aisle at the ends of the rows of cases when not at a dedicated aisle.
- d. 3'-0" at the back and end of the cases for sweeping of the mail.

Exhibit 435c

435002a, Flat Workstation — Open Back: 24 to 30 Separations

Date: Dec. 1994

Distribution Flat Mail

Scale: No Scale

Area: 40 Sq Ft

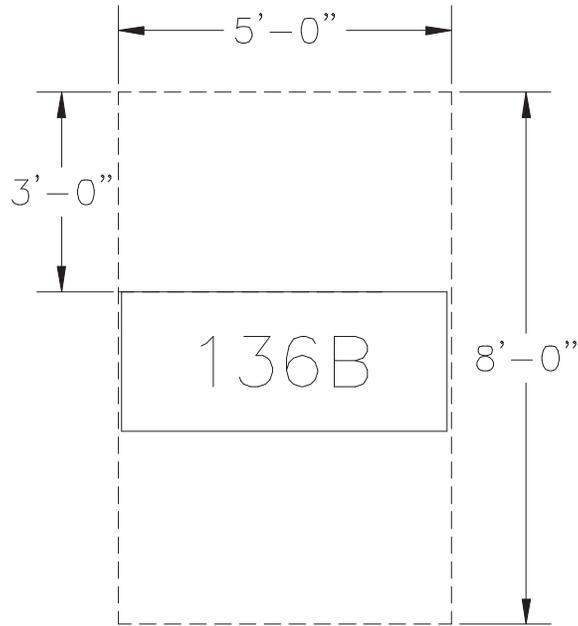


Exhibit 435d

435002b, Flat Workstation — Open Back: 36 to 42 Separations

Date: Dec. 1994

Distribution Flat Mail

Scale: No Scale

Area: 56 Sq Ft

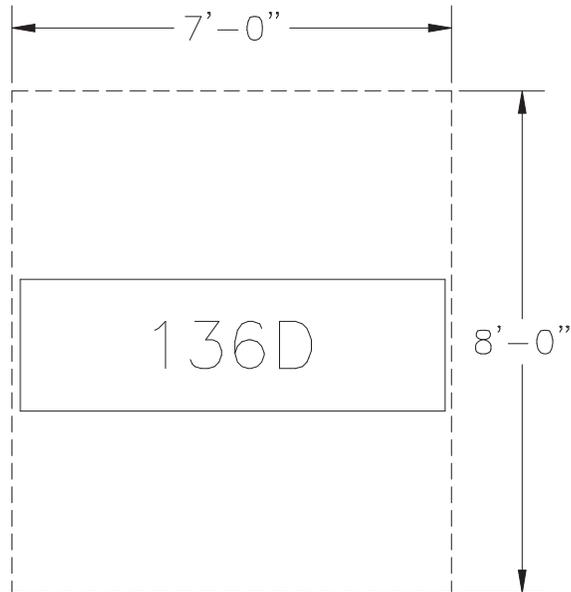
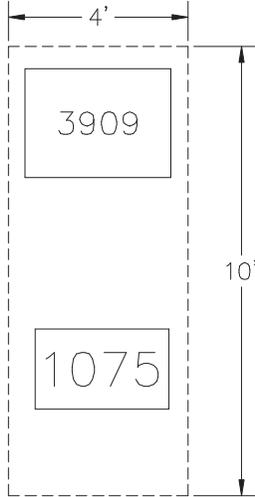


Exhibit 435e

435003a, Flat Distribution Setup: 18 Separations

Date: Dec. 1994
 Distribution Flat Mail
 Scale: No Scale
 Area: 40 Sq Ft



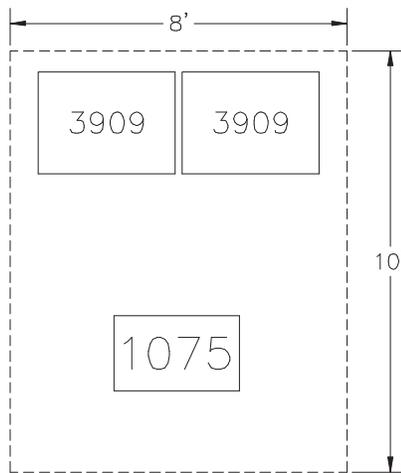
Flats distribution:

- 18 separations per container.
- 8 shelves per container.
- 24 trays per container — shipping capacity.

Exhibit 435f

435003b, Flat Distribution Setup: 19 to 36 Separations

Date: Dec. 1994
 Distribution Flat Mail
 Scale: No Scale
 Area: 80 Sq Ft



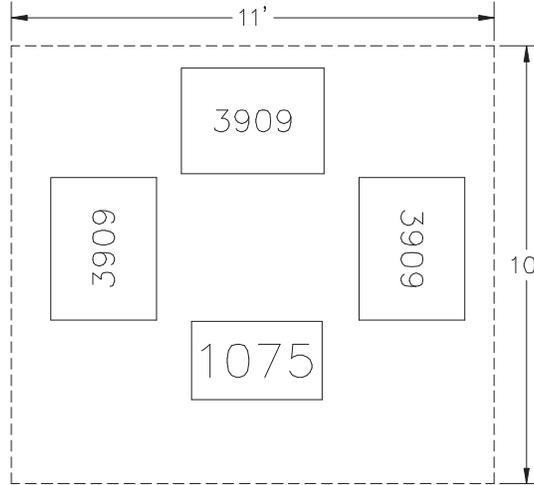
Flats distribution:

- 18 separations per container.
- 8 shelves per container.
- 24 trays per container — shipping capacity.

Exhibit 435g

435003c, Flat Distribution Setup: 37 to 54 Separations

Date: Dec. 1994
 Distribution Flat Mail
 Scale: No Scale
 Area: 110 Sq Ft



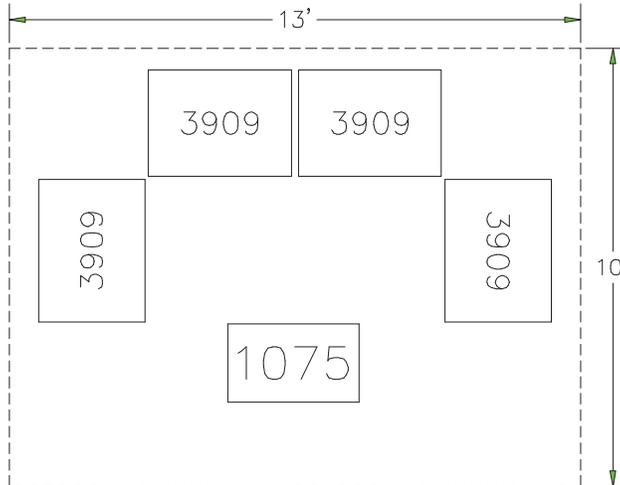
Flats distribution:

- 18 separations per container.
- 8 shelves per container.
- 24 trays per container — shipping capacity.

Exhibit 435h

435003d, Flat Distribution Setup: 55 to 72 Separations

Date: Dec. 1994
 Distribution Flat Mail
 Scale: No Scale
 Area: 130 Sq Ft

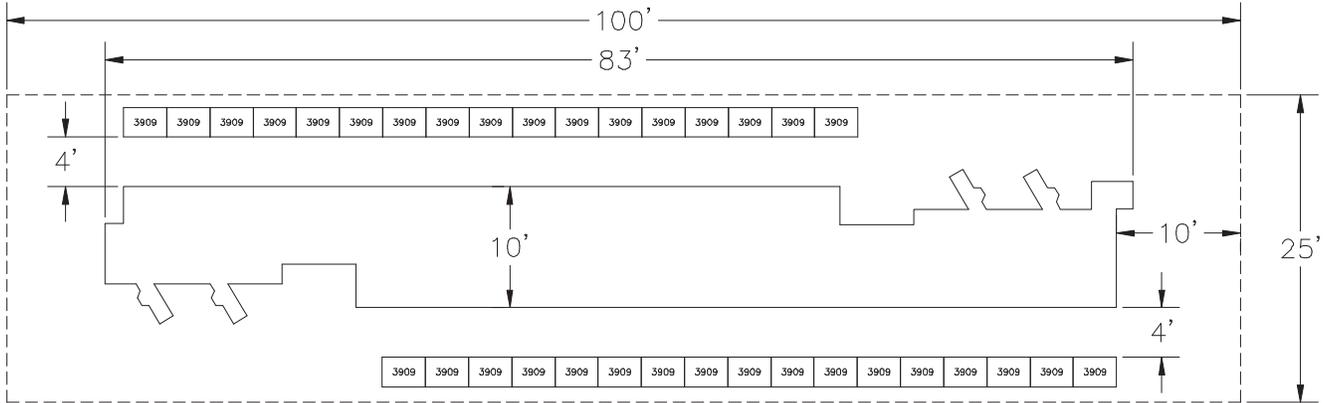


Flats distribution:

- 18 separations per container.
- 8 shelves per container.
- 24 trays per container — shipping capacity.

Exhibit 435i
435008, Flat Sorting Machine (FSM): 2+2 Model

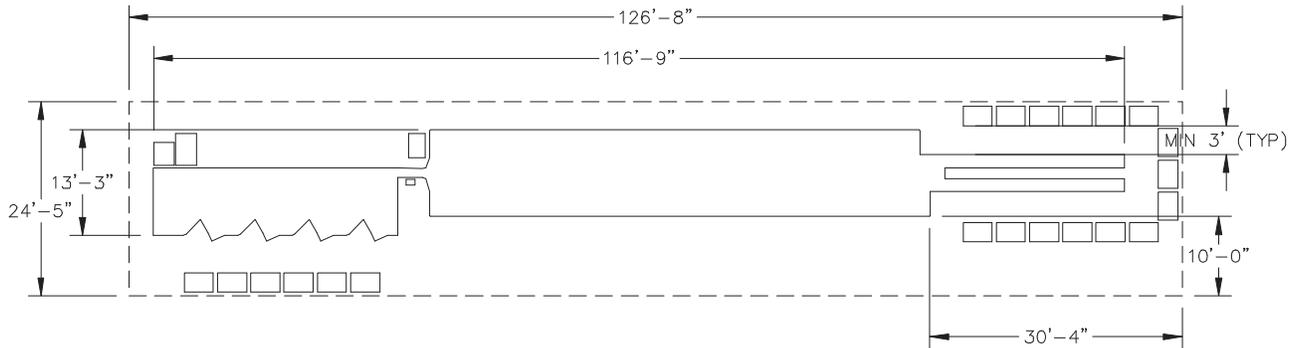
Date: Dec. 1994
Distribution Flat Mail
Scale: No Scale
Area: 2,500 Sq Ft



Note: Same space required for Model 775 Flat Sorting Machine.

Exhibit 435j
435009, Flat Sorting Machine (FSM-1000)

Date: May 1997
Distribution Flat Mail
Scale: No Scale
Area: 3,093 Sq Ft



44 Distribution of IPPs

Exhibit 44a lists the WSUs currently used for mechanized distribution of IPPs. Manual distribution of all classes of small parcels and rolls, circular letters, flat bundles, and ordinary paper bundles is usually done using standard pouching and sacking equipment. Exhibits 44b through 44p illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 44a

WSUs Used for Mechanized Distribution of IPPs

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Consoles | Arrangement | Description |
|------------|------------------------|----------------------|----------|---------------|---------------------------------------|
| 440001a | 440001A.DWG | 10,098 | 4 | Straight Line | Small Parcel and Bundle Sorter (SPBS) |
| 440001b | 440001B.DWG | 10,626 | 5 | | |
| 440001c | 440001C.DWG | 11,154 | 6 | | |
| 440002a | 440002A.DWG | 8,316 | 4 | U-Shaped | Small Parcel and Bundle Sorter |
| 440002b | 440002B.DWG | 8,844 | 5 | | |
| 440002c | 440002C.DWG | 9,372 | 6 | | |
| 440003a | 440003A.DWG | 8,316 | 4 | L-Shaped | Small Parcel and Bundle Sorter |
| 440003b | 440003B.DWG | 8,844 | 5 | | |
| 440003c | 440003C.DWG | 9,372 | 6 | | |
| 440011a | 440011A.DWG | 10,098 | 4 | Straight Line | SPBS With Siemens Feed System |
| 440011b | 440011B.DWG | 10,626 | 5 | | |
| 440011c | 440011C.DWG | 11,154 | 6 | | |
| 440021a | 440021A.DWG | 10,098 | 4 | Straight Line | SPBS With Lockheed Martin System* |
| 440021b | 440021B.DWG | 10,626 | 5 | | |
| 440021c | 440021C.DWG | 11,154 | 6 | | |

* A maneuvering area for forklift and pallet jacks is required which uses part of the 20 percent staging area as illustrated in the templates.

Exhibit 44b
440001a, Small Parcel and Bundle Sorter: Straight Line (Without Feed System) — 4 Consoles

Date: Dec. 1997
Distribution IPPS
Scale: No Scale
Area: 10,098 Sq Ft

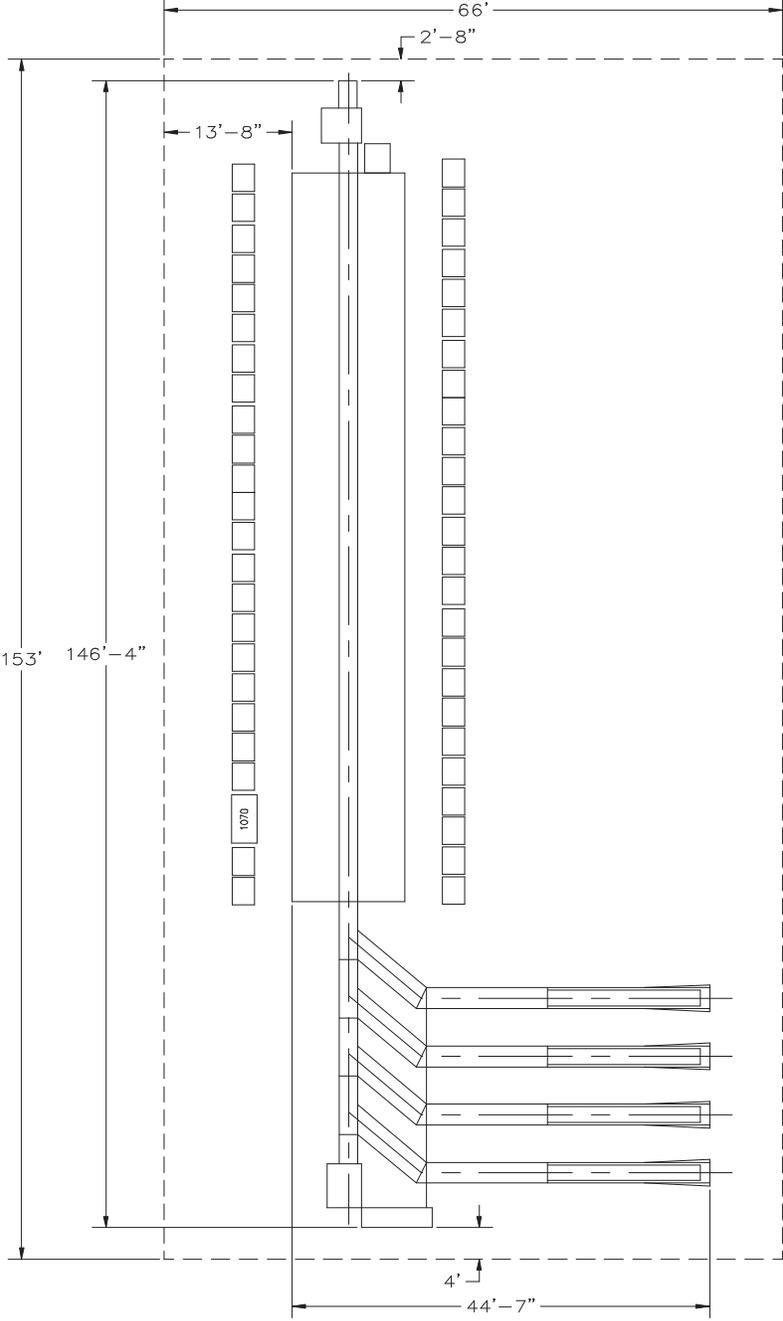


Exhibit 44c

440001b, Small Parcel and Bundle Sorter: Straight Line (Without Feed System) — 5 Consoles

Date: Dec. 1997
Distribution IPPS
Scale: No Scale
Area: 10,626 Sq Ft

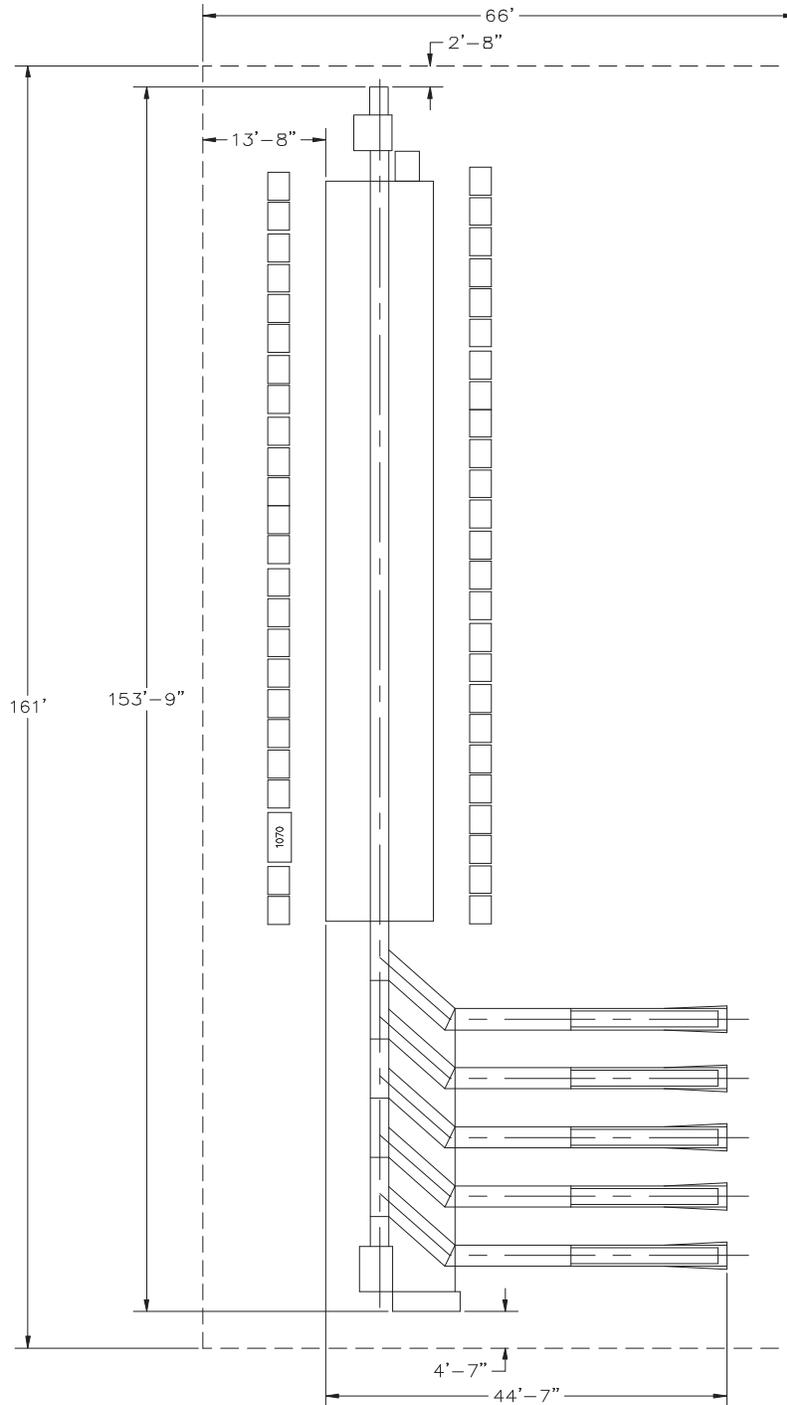


Exhibit 44d
440001c, Small Parcel and Bundle Sorter: Straight Line (Without Feed System) — 6 Consoles

Date: Dec. 1997
Distribution IPPS
Scale: No Scale
Area: 11,154 Sq Ft

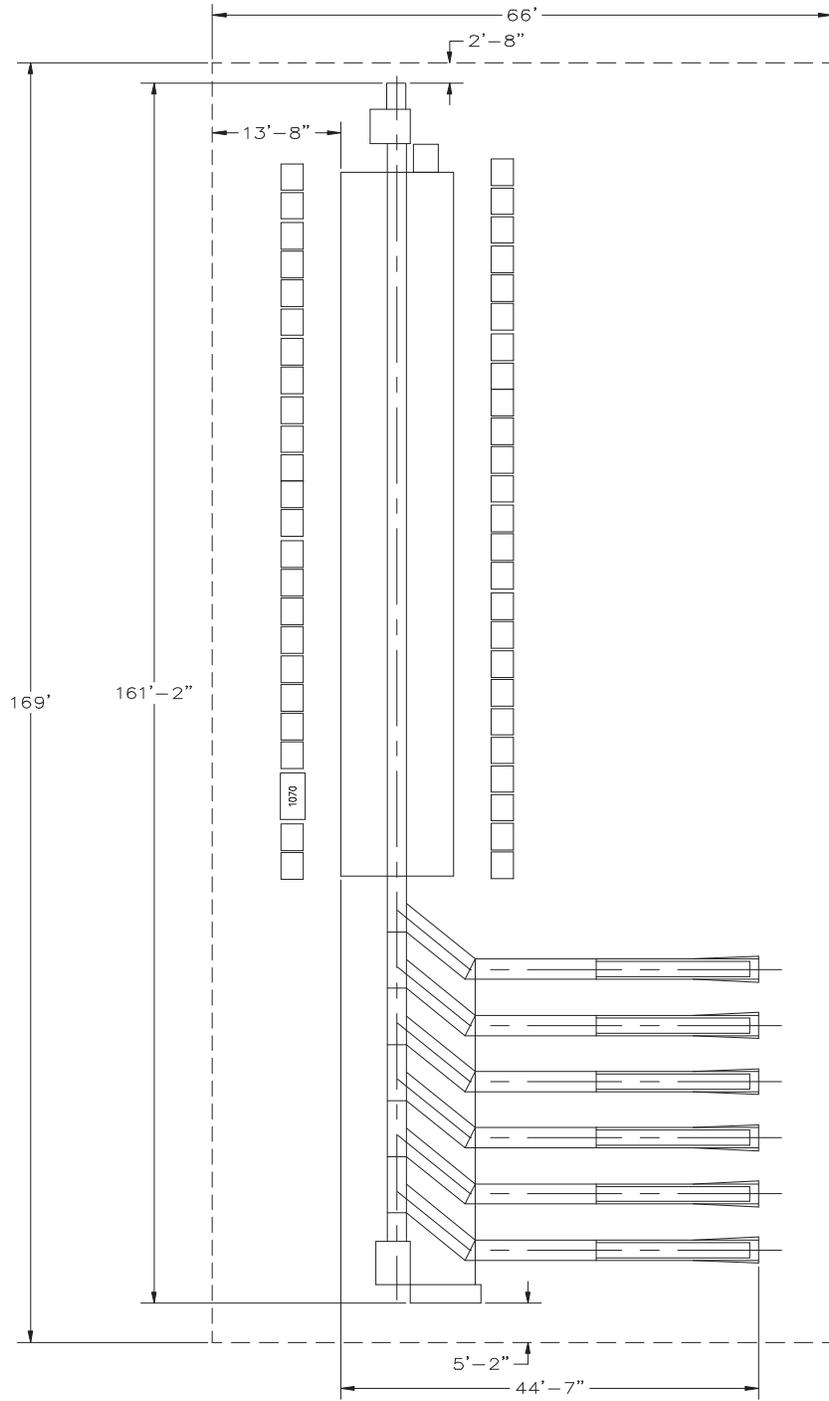


Exhibit 44e
440002a, Small Parcel and Bundle Sorter: U-Shaped — 4 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 8,316 Sq Ft

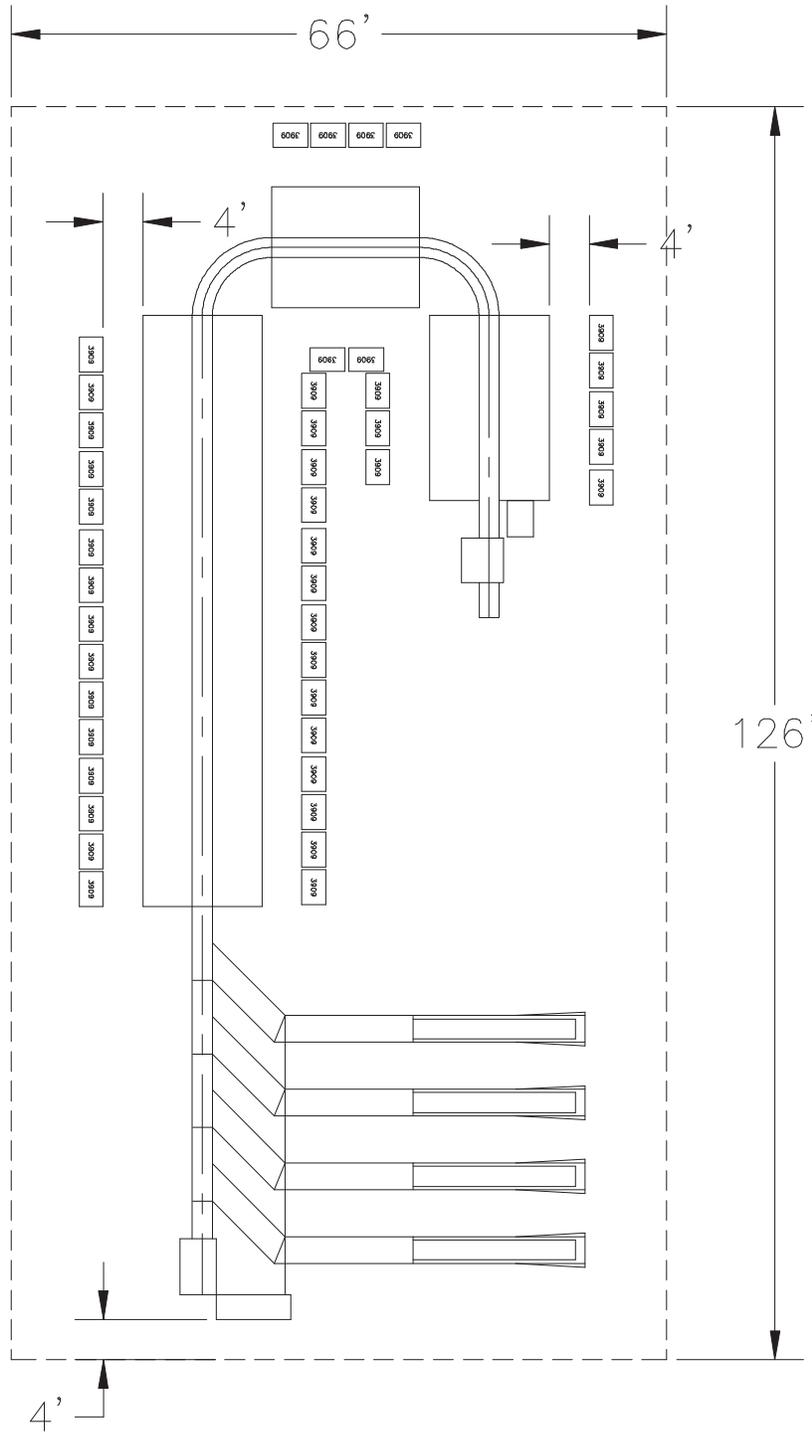


Exhibit 44f
440002b, Small Parcel and Bundle Sorter: U-Shaped — 5 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 8,844 Sq Ft

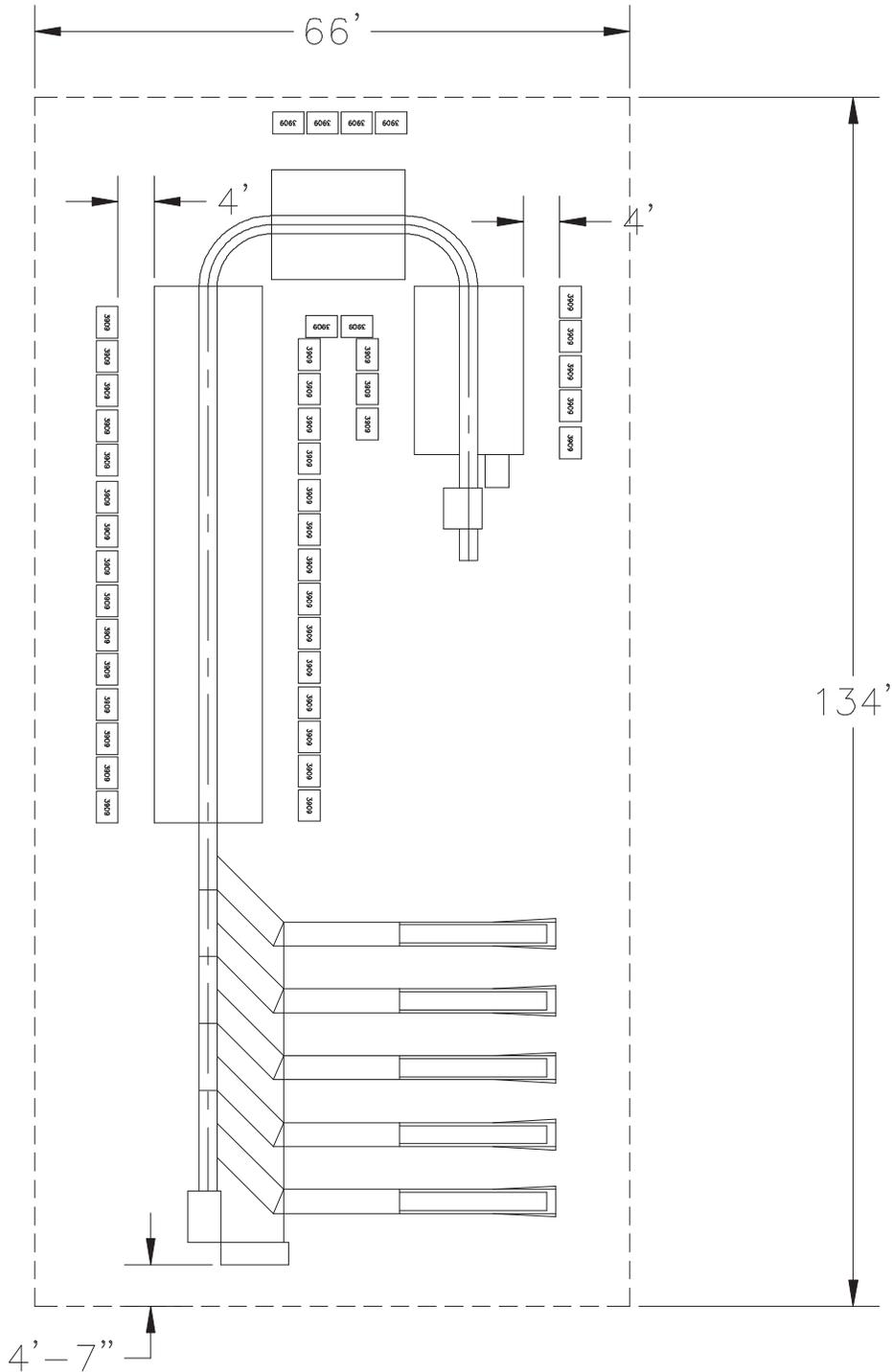


Exhibit 44g
440002c, Small Parcel and Bundle Sorter: U-Shaped — 6 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 9,372 Sq Ft

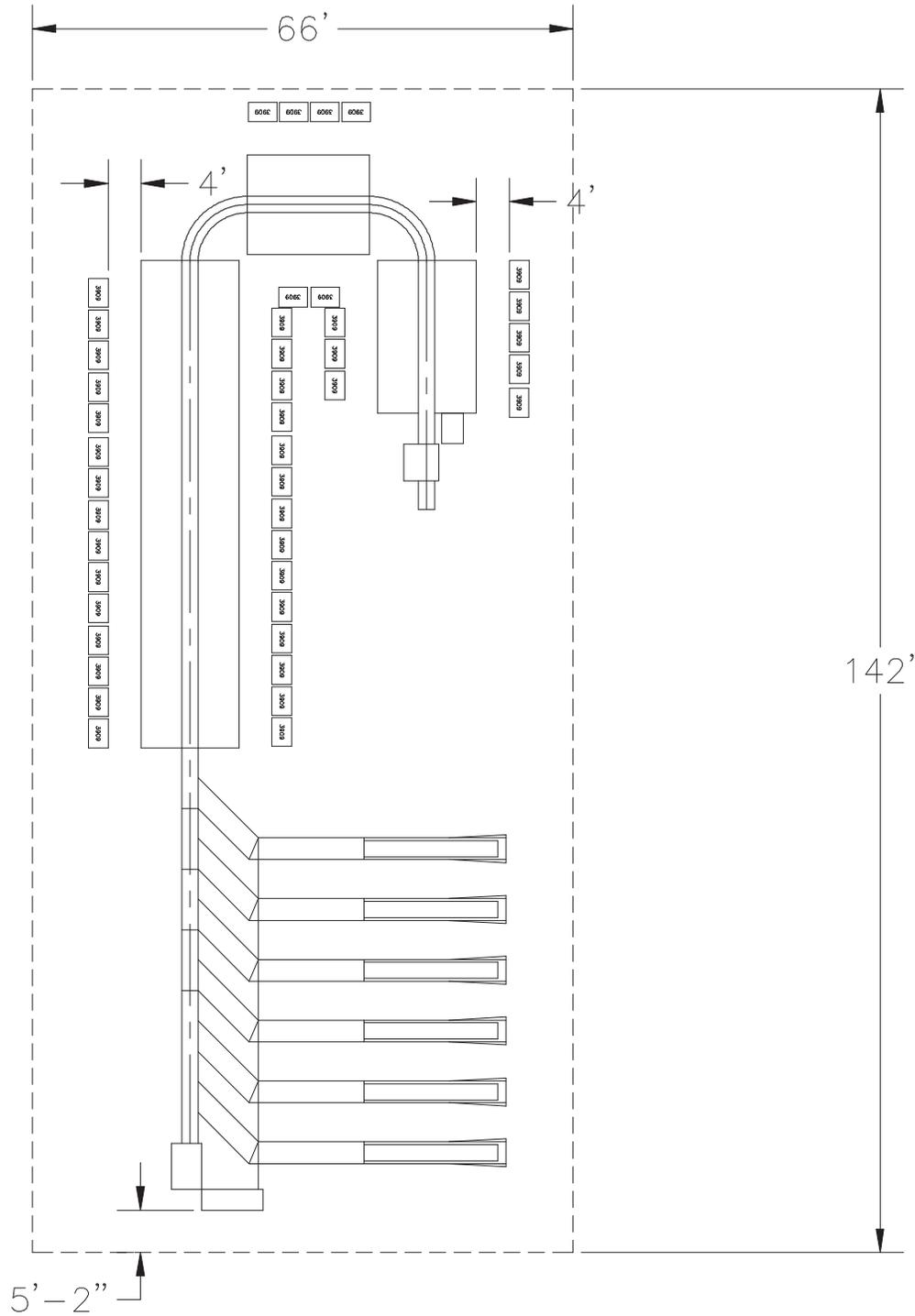


Exhibit 44h
440003a, Small Parcel and Bundle Sorter: L-Shaped — 4 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 8,316 Sq Ft

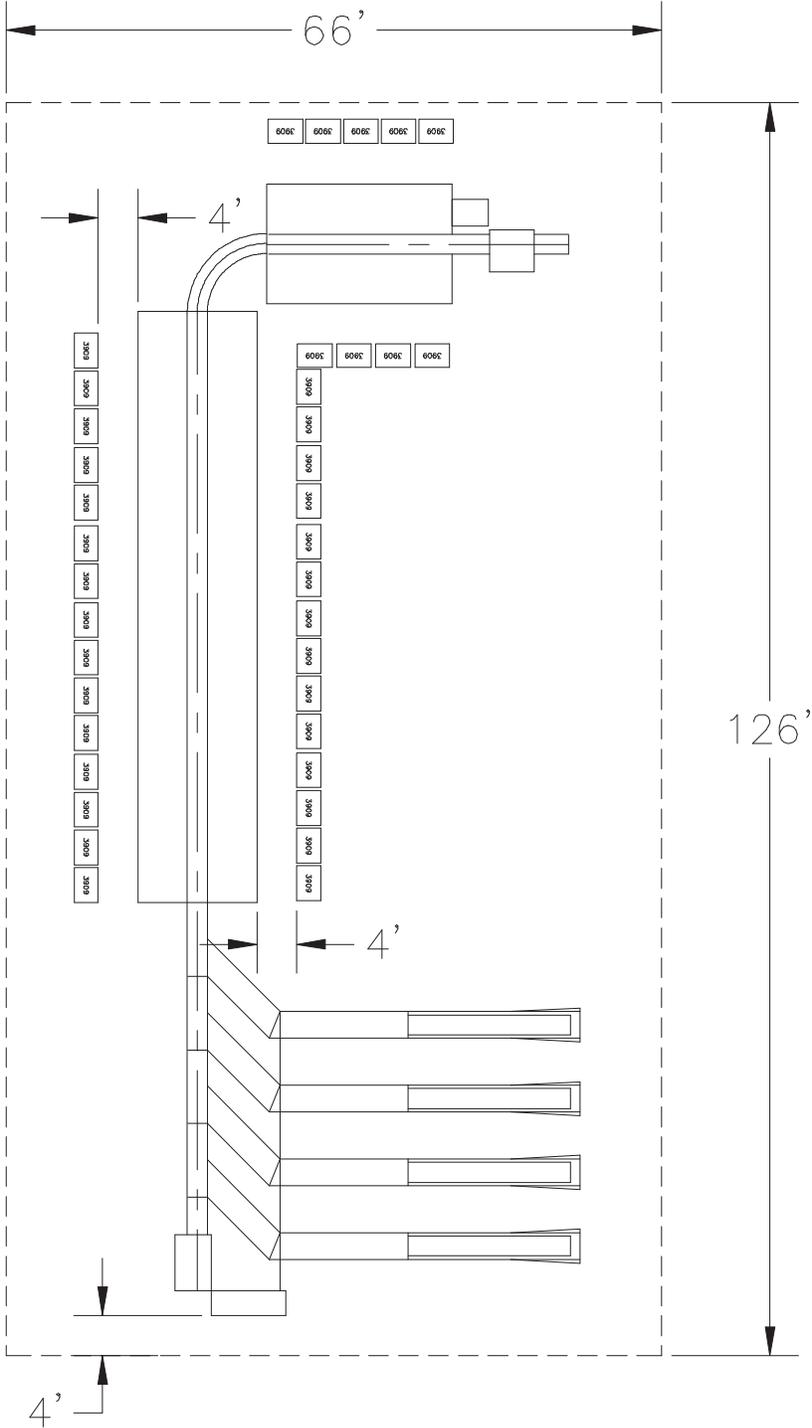


Exhibit 44i
440003b, Small Parcel and Bundle Sorter: L-Shaped — 5 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 8,844 Sq Ft

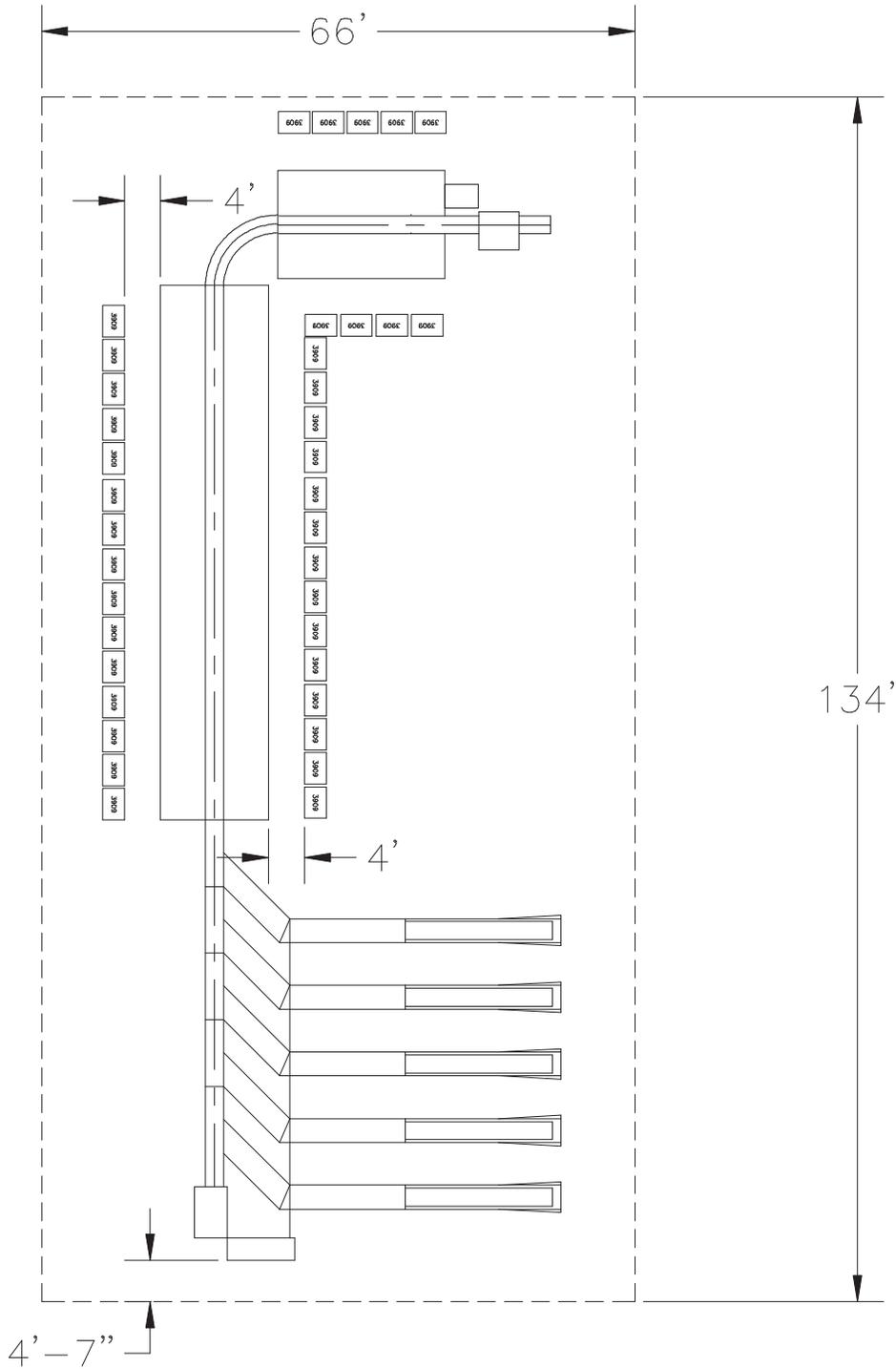


Exhibit 44j
440003c, Small Parcel and Bundle Sorter: L-Shaped — 6 Consoles

Date: Dec. 1994
Distribution IPPS
Scale: No Scale
Area: 9,372 Sq Ft

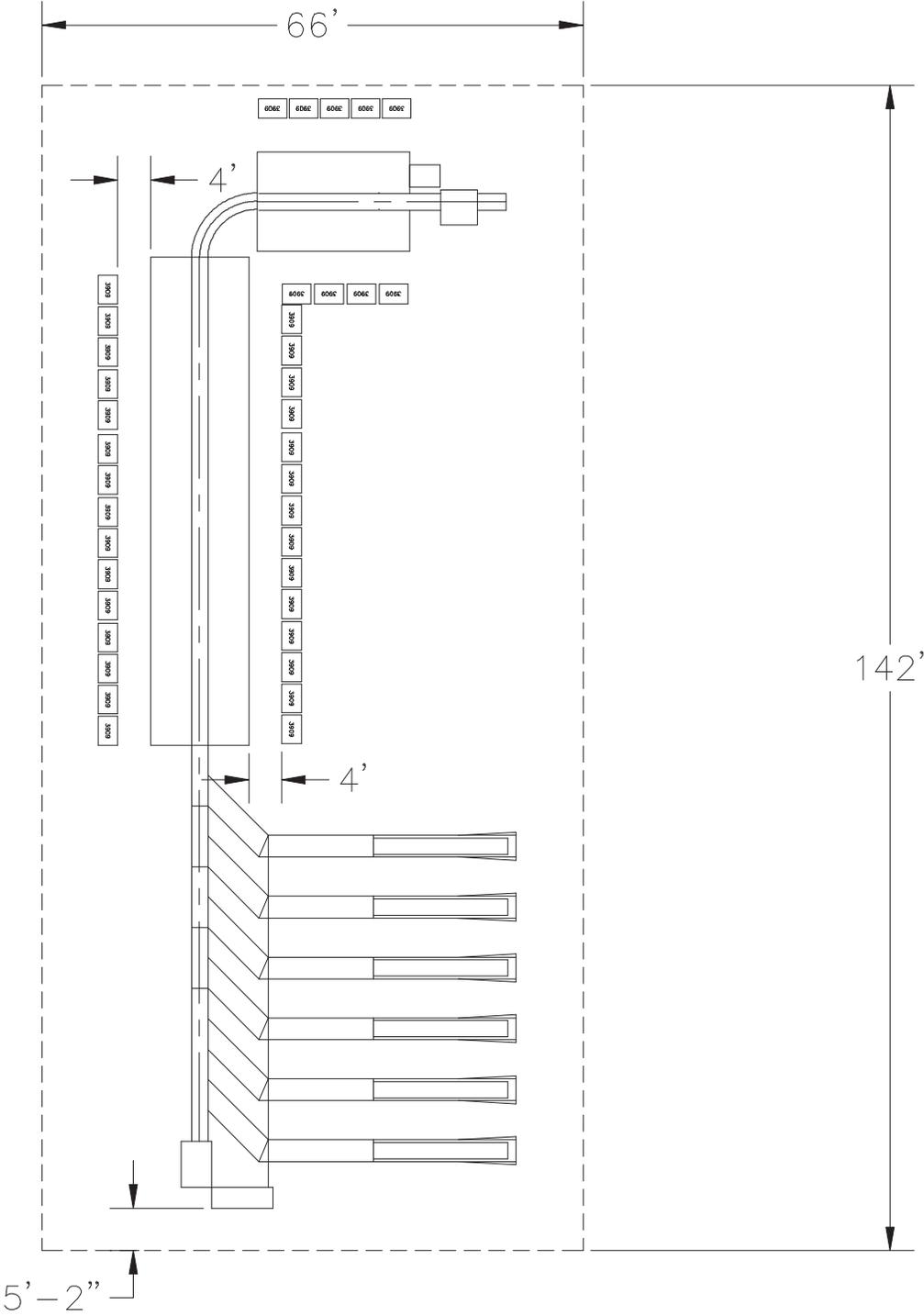


Exhibit 44m
440011c, Small Parcel and Bundle Sorter: Straight Line (With Siemens Feed System) — 6 Consoles

Date: Jan. 1998
Distribution IPPS
Scale: No Scale
Area: 11,154 Sq Ft

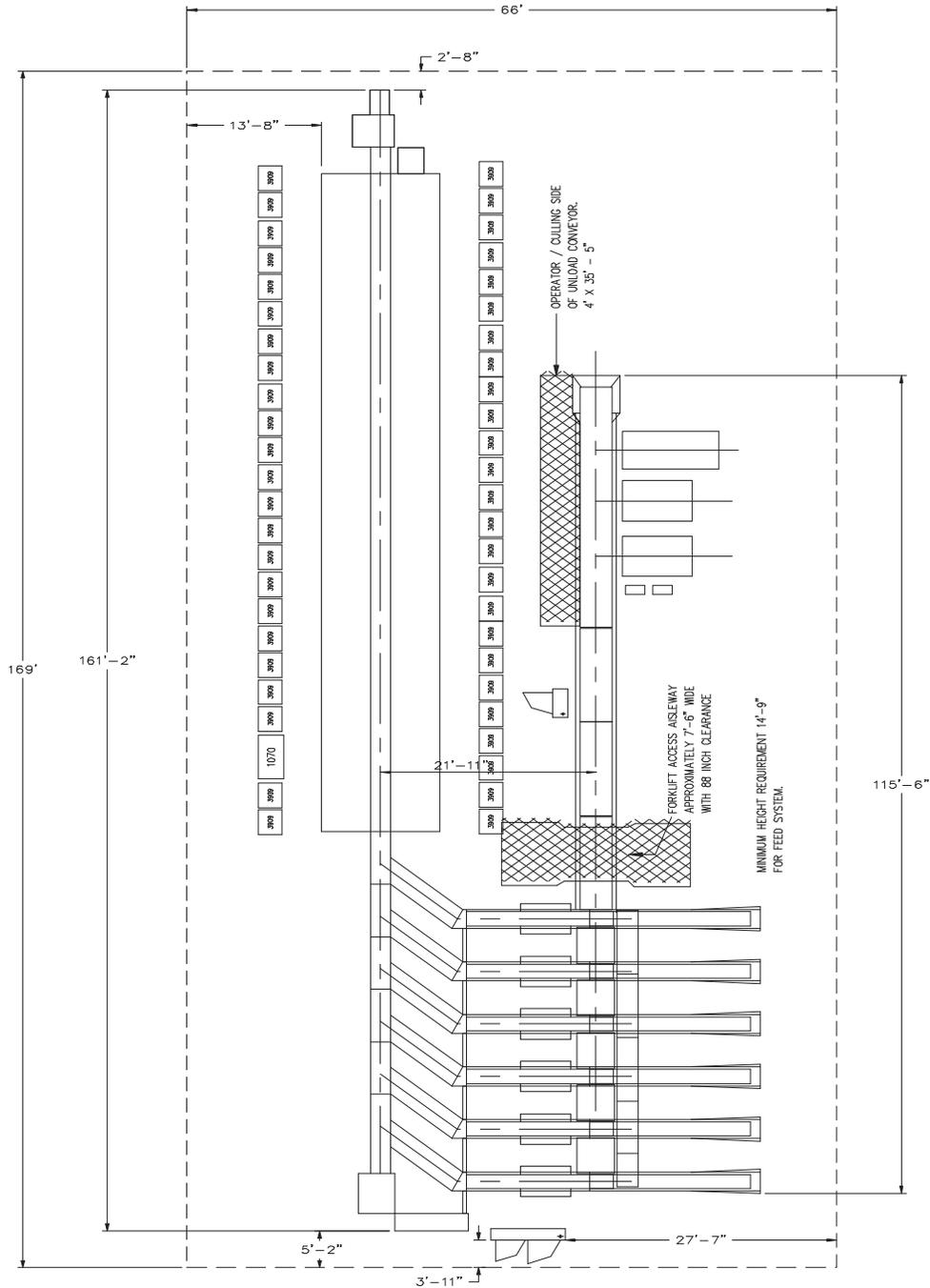


Exhibit 44n
440021a, Small Parcel and Bundle Sorter: Straight Line (With Lockheed Martin Feed System) — 4 Consoles

Date: Jan. 1998
 Distribution IPPS
 Scale: No Scale
 Area: 10,098 Sq Ft

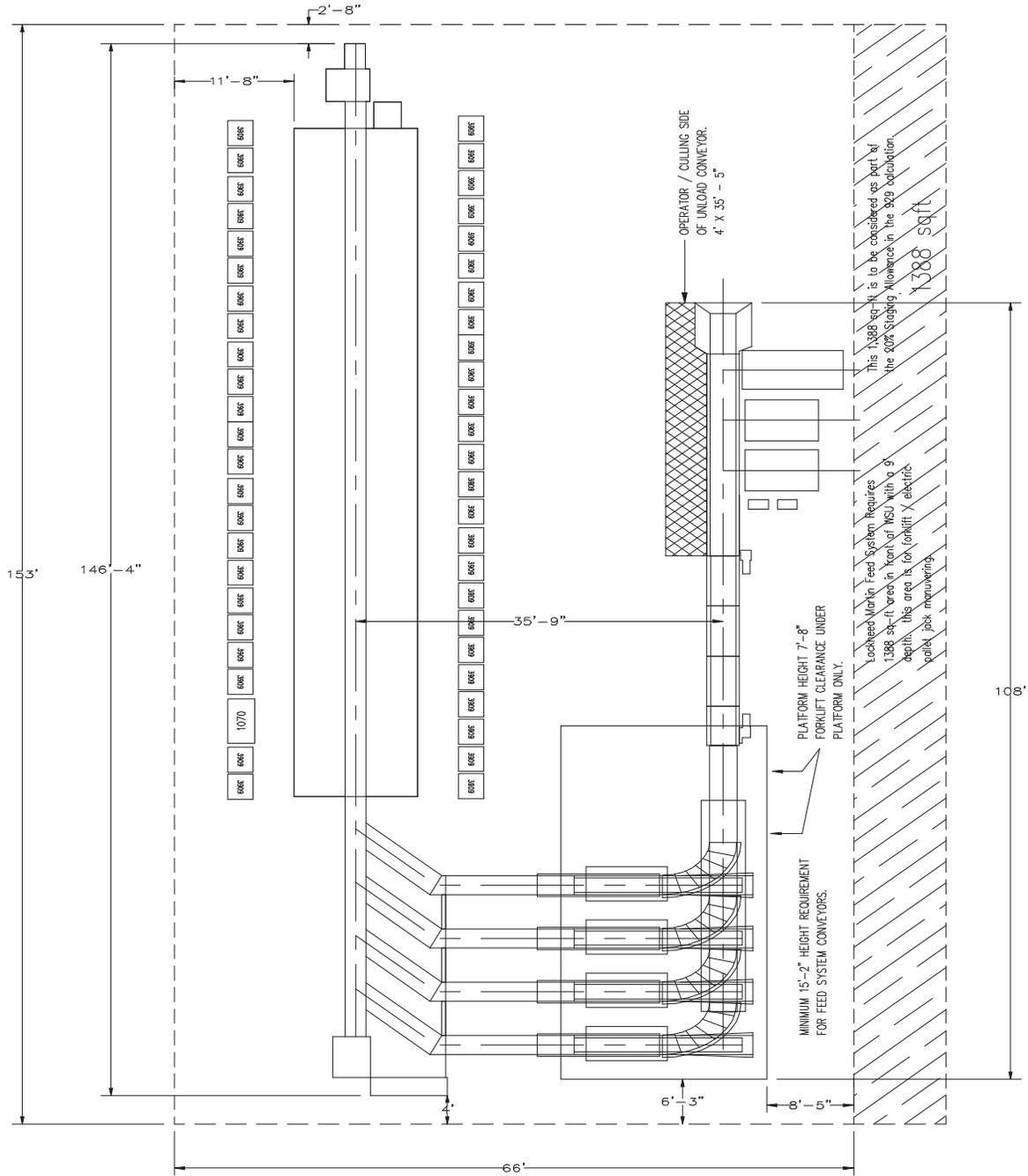
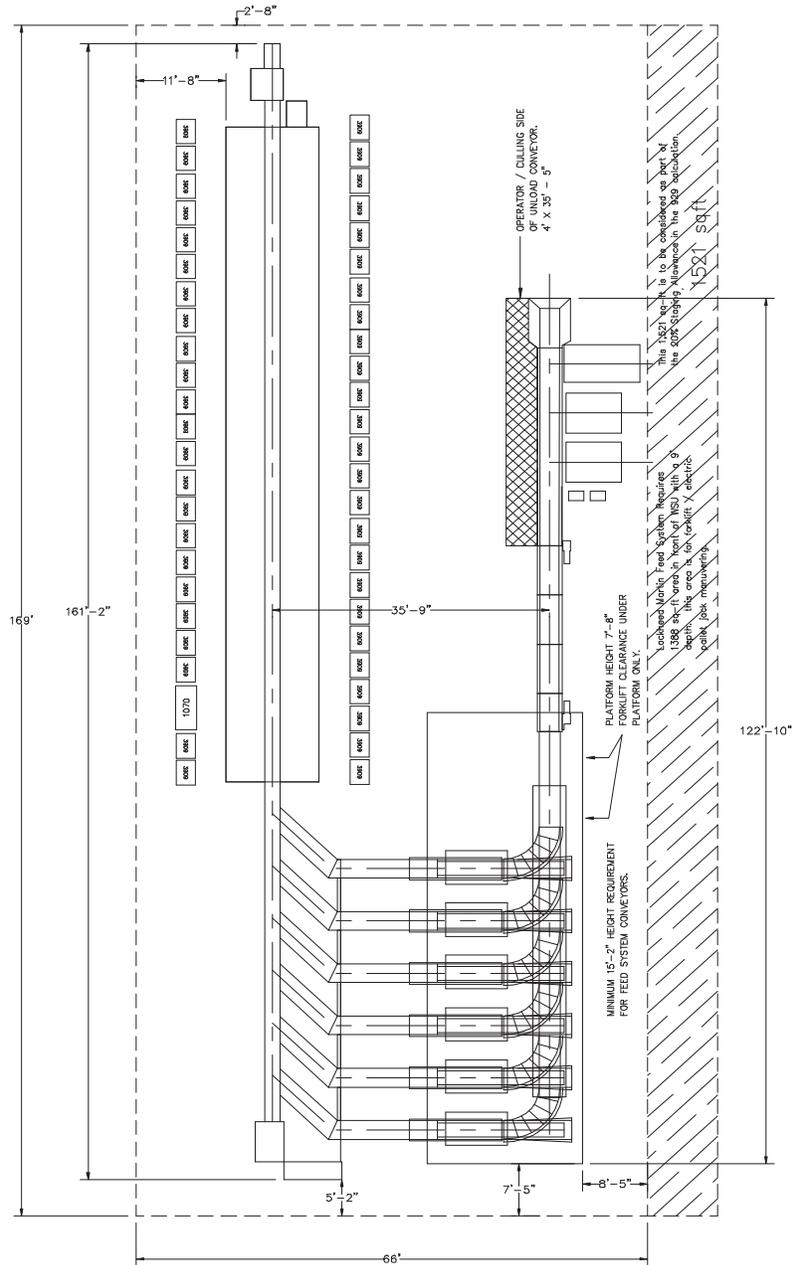


Exhibit 44p
440021c, Small Parcel and Bundle Sorter: Straight Line (With Lockheed Martin Feed System) — 6 Consoles

Date: Jan. 1998
 Distribution IPPS
 Scale: No Scale
 Area: 11,154 Sq Ft



45 Processing Special Category Mail

Use distribution of parcel post standards (section 46) for special delivery parcels, airmail parcels, and priority and special handling parcels.

46 Distribution of Parcel Post

Exhibit 46a lists the WSUs currently used for parcel post distribution. Exhibits 46b through 46s illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 46a

WSUs Used for Parcel Post Distribution

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Separations | Description |
|------------|------------------------|----------------------|-------------|---|
| 460001a | 460001A.DWG | 255 | 5 | Sort to 1033 Hampers |
| 460001b | 460001B.DWG | 470 | 10 | Sort to 1033 Hampers |
| 460004a | 460004A.DWG | 1,122 | 16–40 | Sort to 1033 Hampers From Hampers, Gurneys, and Sacks |
| 460004b | 460004B.DWG | 1,296 | 52 | Sort to 1033 Hampers From Hampers, Gurneys, and Sacks |
| 460004c | 460004C.DWG | 1,494 | 60 | Sort to 1033 Hampers From Hampers, Gurneys, and Sacks |
| 460004d | 460004D.DWG | 1,874 | 74 | Sort to 1033 Hampers From Hampers, Gurneys, and Sacks |
| 460004e | 460004E.DWG | 2,123 | 90 | Sort to 1033 Hampers From Hampers, Gurneys, and Sacks |
| 460009a | 460009A.DWG | 587 | 5–10 | Sort to 1046 Hampers |
| 460009b | 460009B.DWG | 684 | 11–19 | Sort to 1046 Hampers |
| 460011 | 460011.DWG | 1,356 | 20–40 | Sort to 1046 Hampers From Hampers, Gurneys, and Sacks |
| 460019a | 460019A.DWG | 222 | 5–10 | Sort to Sacks |
| 460019b | 460019B.DWG | 440 | 15–20 | Sort to Sacks |
| 460019c | 460019C.DWG | 440 | 25–30 | Sort to Sacks |
| 460019d | 460019D.DWG | 515 | 40–50 | Sort to Sacks |
| 460019e | 460019E.DWG | 684 | 60–70 | Sort to Sacks |
| 460019f | 460019F.DWG | 794 | 90 | Sort to Sacks |
| 460020a | 460020A.DWG | 724 | 30–50 | Sort to Sacks From Hampers, Gurneys, or Sacks |
| 460020b | 460020B.DWG | 932 | 60–90 | Sort to Sacks From Hampers, Gurneys, or Sacks |

Exhibit 46b
460001a, Sort to 1033 Hampers (5 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 255 Sq Ft

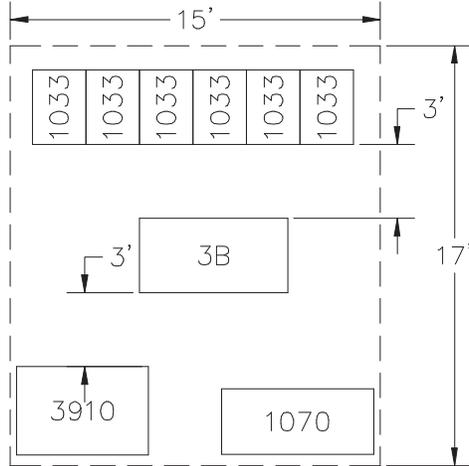


Exhibit 46c
460001b, Sort to 1033 Hampers (10 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 470 Sq Ft

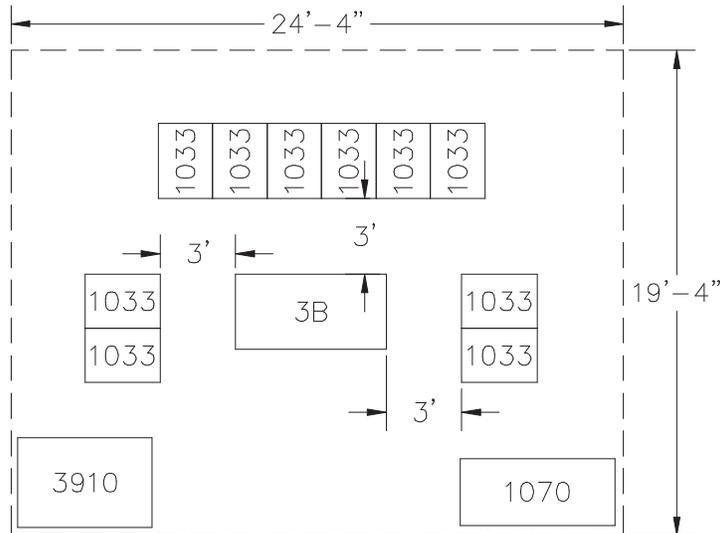


Exhibit 46d

460004a, Sort to 1033 Hampers From Hampers, Gurneys, and Sacks (16-40 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 1,122 Sq Ft

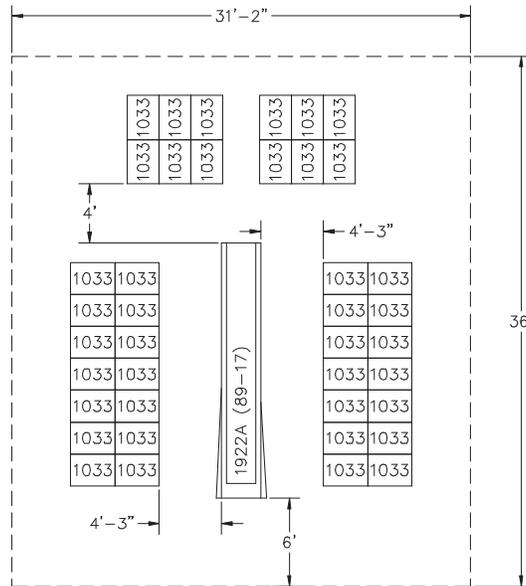


Exhibit 46e

460004b, Sort to 1033 Hampers From Hampers, Gurneys, and Sacks (52 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 1,296 Sq Ft

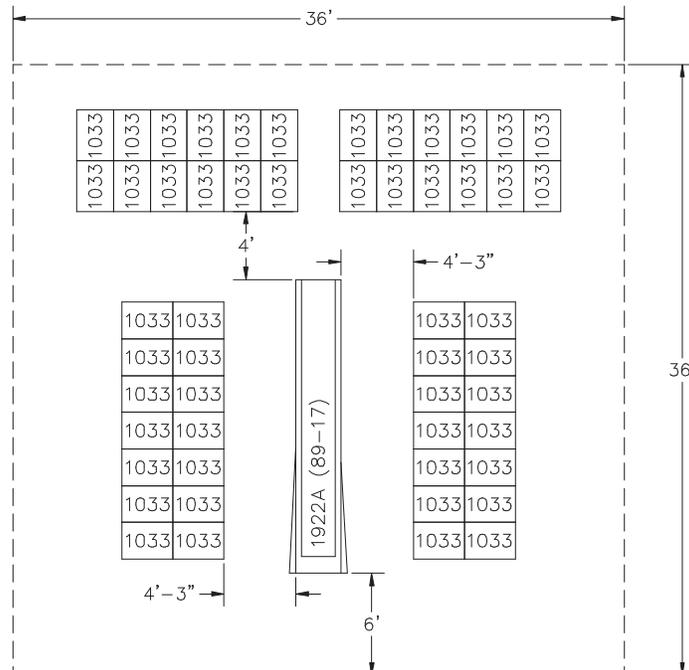


Exhibit 46f

460004c, Sort to 1033 Hampers From Hampers, Gurneys, and Sacks (60 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 1,494 Sq Ft

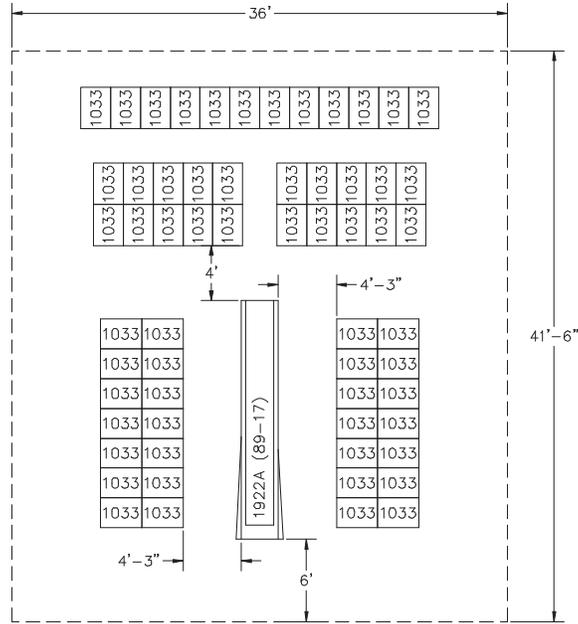


Exhibit 46g

460004d, Sort to 1033 Hampers From Hampers, Gurneys, and Sacks (74 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 1,874 Sq Ft

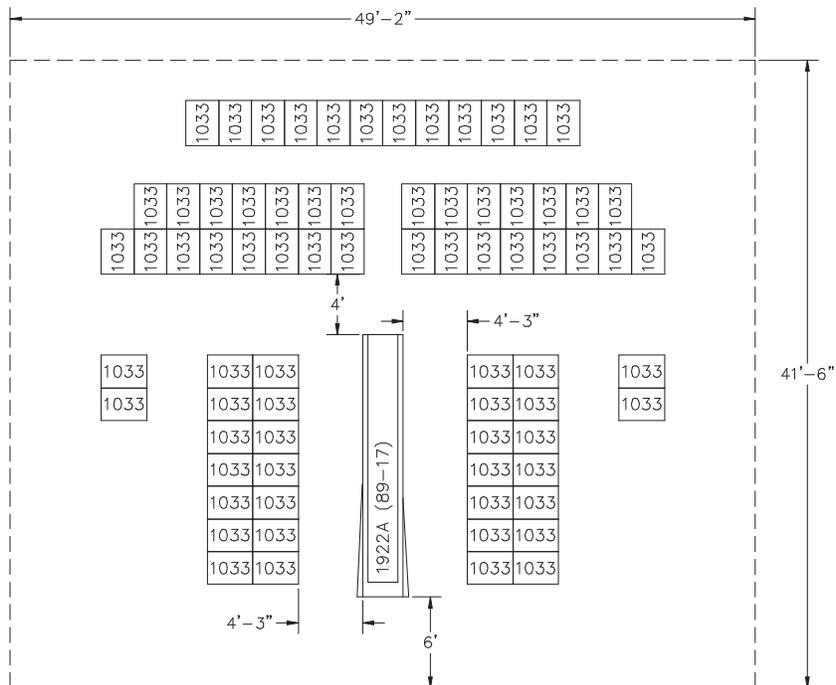


Exhibit 46h

460004e, Sort to 1033 Hampers From Hampers, Gurneys, and Sacks (90 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 2,123 Sq Ft

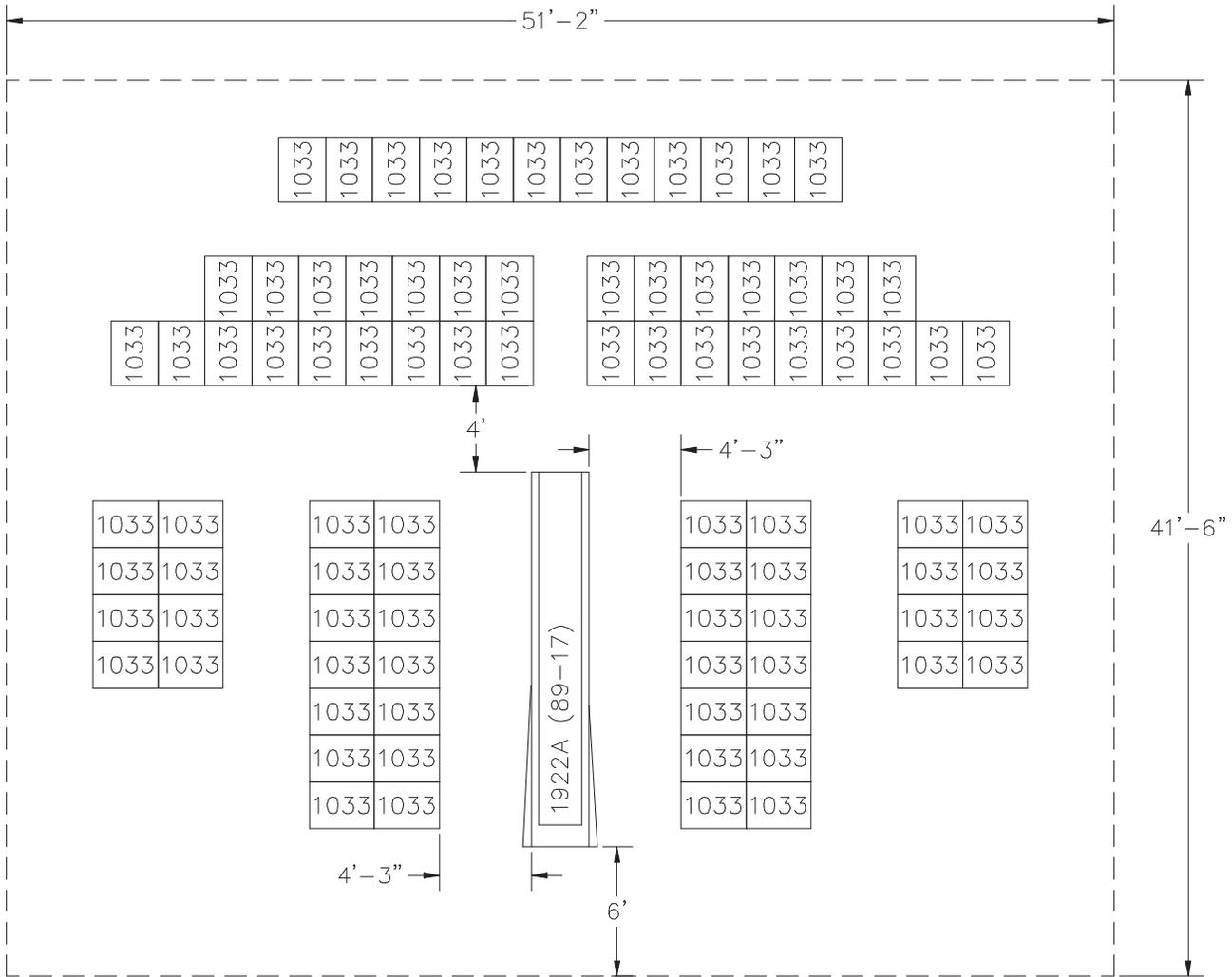


Exhibit 46i
460009a, Sort to 1046 Hampers (5–10 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 587 Sq Ft

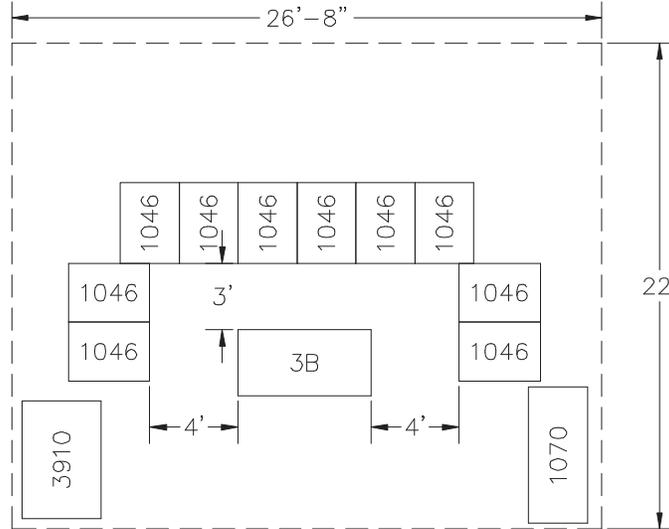


Exhibit 46j
460009b, Sort to 1046 Hampers (11–19 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 684 Sq Ft

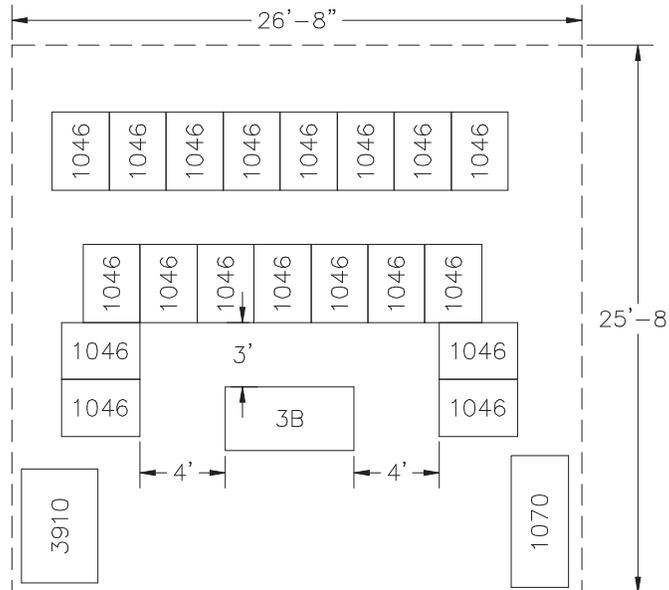


Exhibit 46k

460011, Sort to 1046 Hampers From Hampers, Gurneys, and Sacks (20-40 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 1,356 Sq Ft

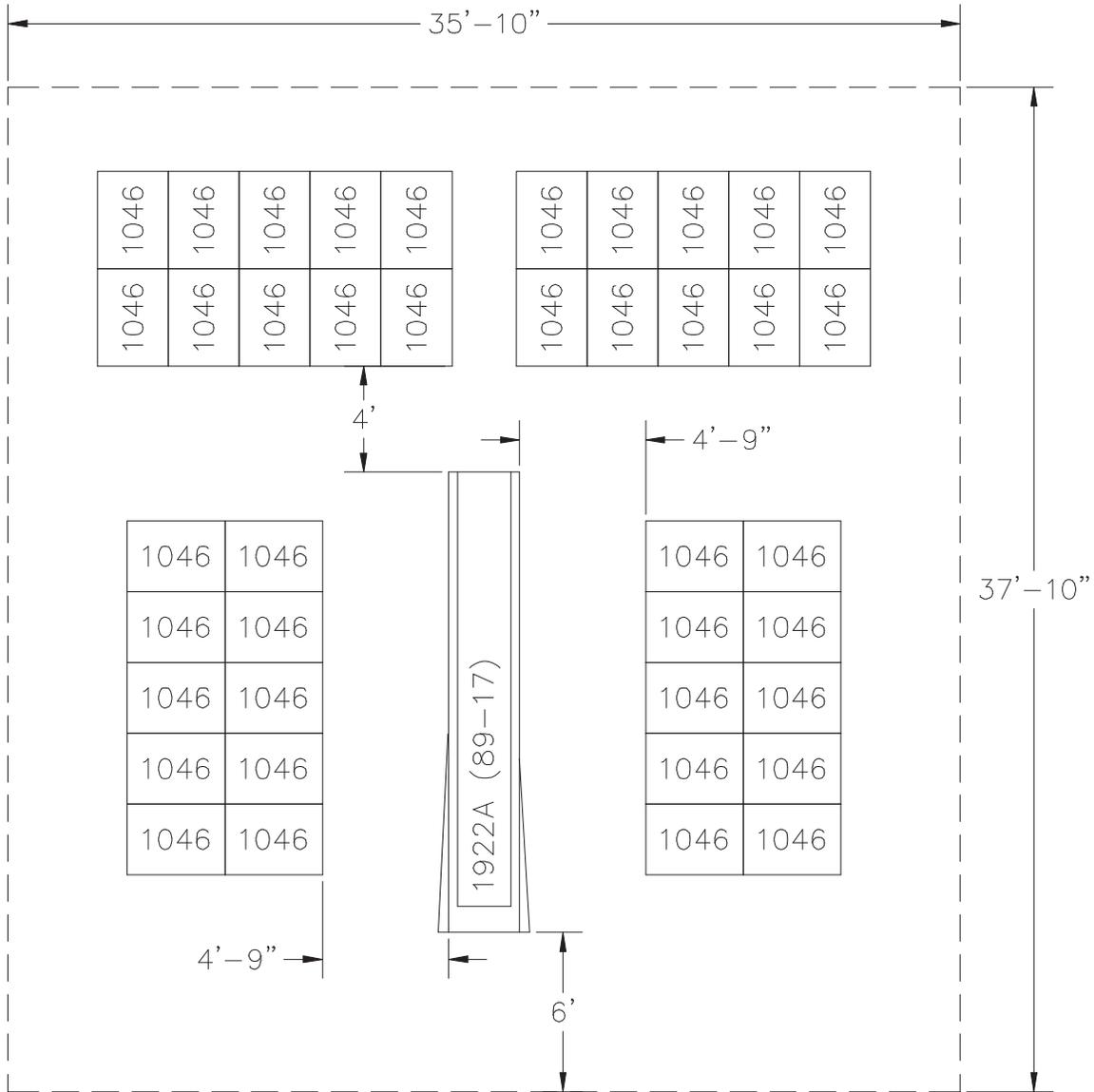


Exhibit 46l
460019a, Sort to Sacks (5–10 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 222 Sq Ft

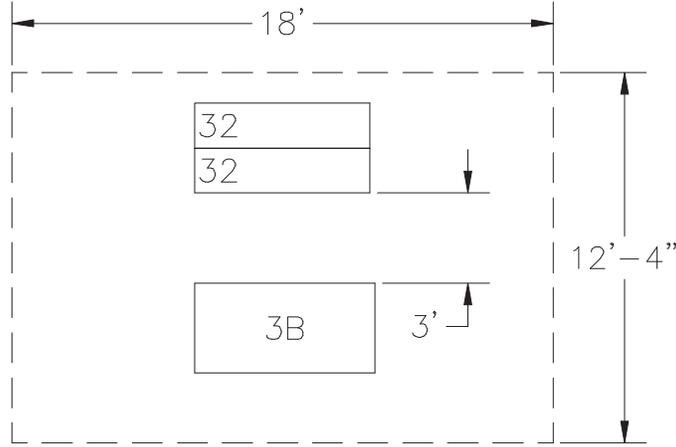


Exhibit 46m
460019b, Sort to Sacks (15–20 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 440 Sq Ft

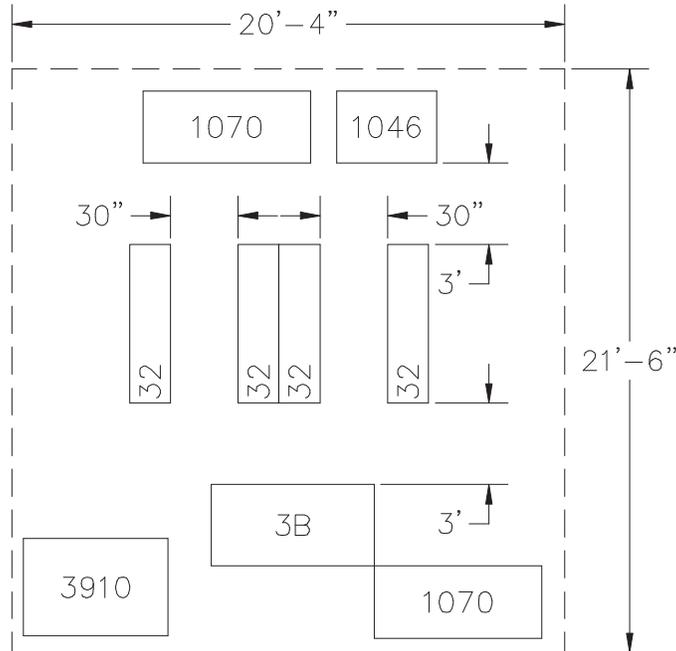


Exhibit 46n
460019c, Sort to Sacks (25–30 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 440 Sq Ft

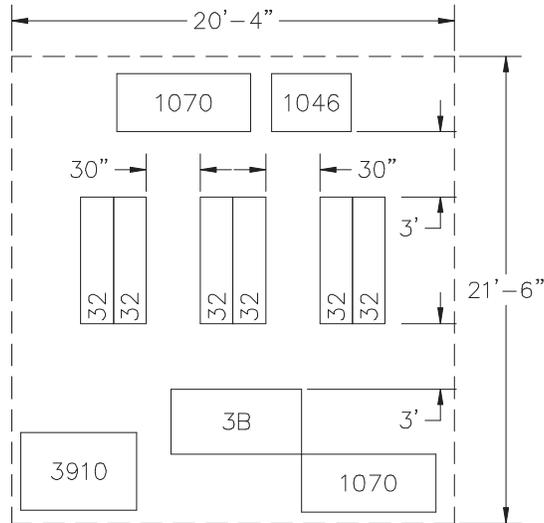


Exhibit 46o
460019d, Sort to Sacks (40–50 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 515 Sq Ft

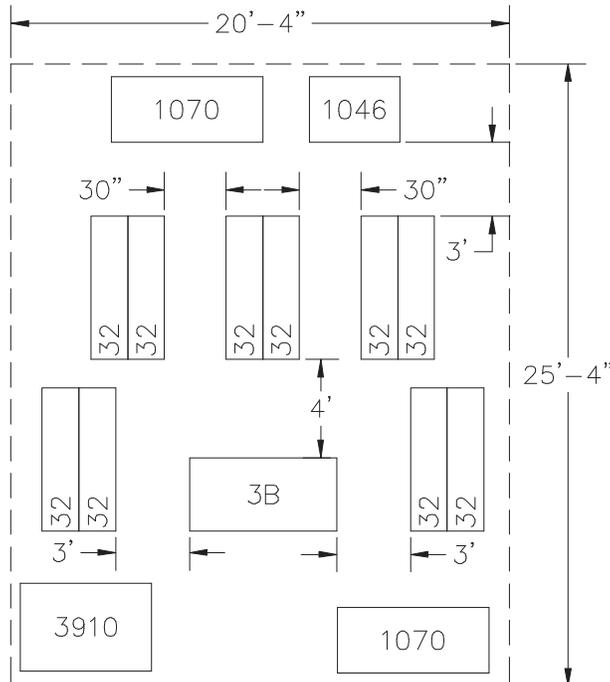


Exhibit 46p
460019e, Sort to Sacks (60-70 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 684 Sq Ft

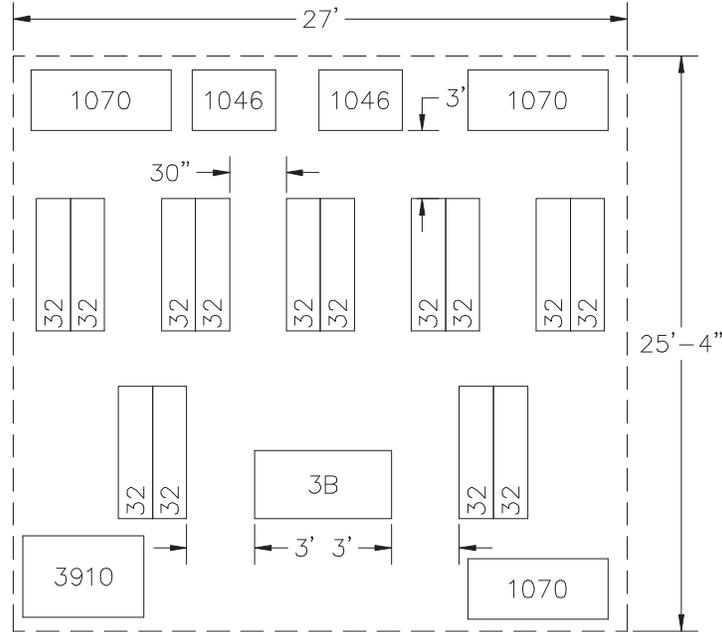


Exhibit 46q
460019f, Sort to Sacks (90 Separations)

Date: Dec. 1994
 Distribution Parcel Post
 Scale: No Scale
 Area: 794 Sq Ft

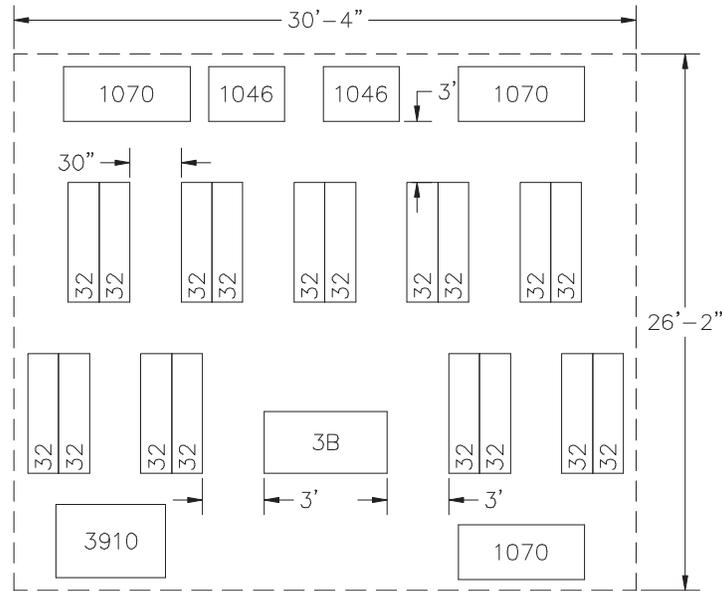


Exhibit 46r

460020a, Sort to Sacks From Hampers, Gurneys, or Sacks (30–50 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 724 Sq Ft

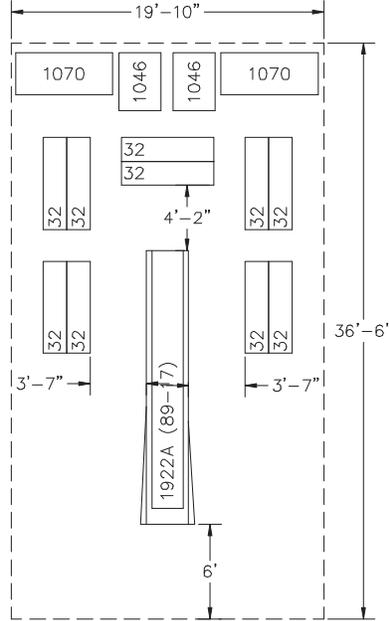
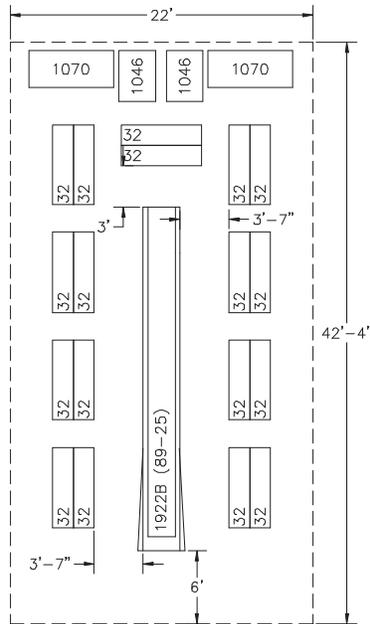


Exhibit 46s

460020b, Sort to Sacks From Hampers, Gurneys, or Sacks (60–90 Separations)

Date: Dec. 1994
Distribution Parcel Post
Scale: No Scale
Area: 932 Sq Ft



47 Bulk Sorting and Material Handling Operations

471 Bulk Sorting

Exhibit 471a lists the WSUs currently used for manual and mechanized bulk sorting. Exhibits 471b, 471c, and 471d illustrate the manual bulk sorting WSUs, and Exhibits 471e through 471h illustrate the different-sized WSUs for universal sorting systems.

Exhibit 471a

WSUs Used for Manual and Mechanized Bulk Sorting

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Description |
|------------|------------------------|----------------------|---|
| 471001 | 471001.DWG | 1610 | Manual Sack Sort — Platform Trucks (15 Separations) |
| 471002 | 471002.DWG | 6400 | Multislide — Sack Racks (10 Separations) |
| 471004 | 471004.DWG | 1645 | Manual Sack Sort — Sawtooth (15 Separations) |
| 471005 | 471005.DWG | 5,000 | Universal Sorting System |
| 471006 | 471006.DWG | 10,000 | Universal Sorting System |
| 471007 | 471007.DWG | 15,000 | Universal Sorting System |
| 471008 | 471008.DWG | 20,000 | Universal Sorting System |

Note: Transfer, dispatch, and holding area:

- a. Item 1070, platform truck, to be parked — 30 sq ft each.
- b. Item 1070, platform truck, for separation of mail — 60 sq ft each.

Exhibit 471b
471001, Manual Sack Sort — Platform Trucks (15 Separations)

Date: Dec. 1994
Distribution Sacks
Scale: No Scale
Area: 1,610 Sq Ft

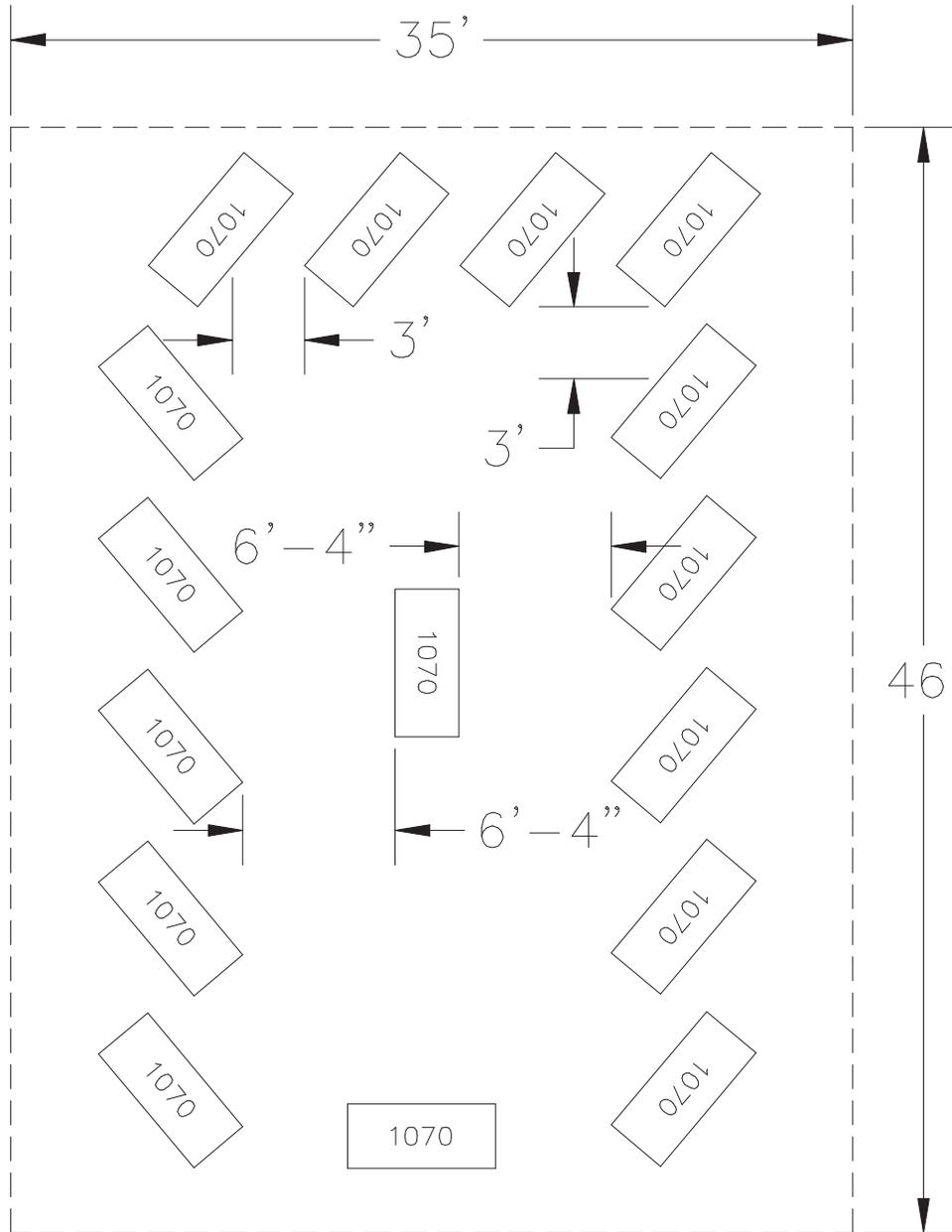


Exhibit 471c
471002, Manual Sort — Multislide (10 Separations)

Date: Oct. 1998
Distribution Bulk
Scale: No Scale
Area: 6,400 Sq Ft

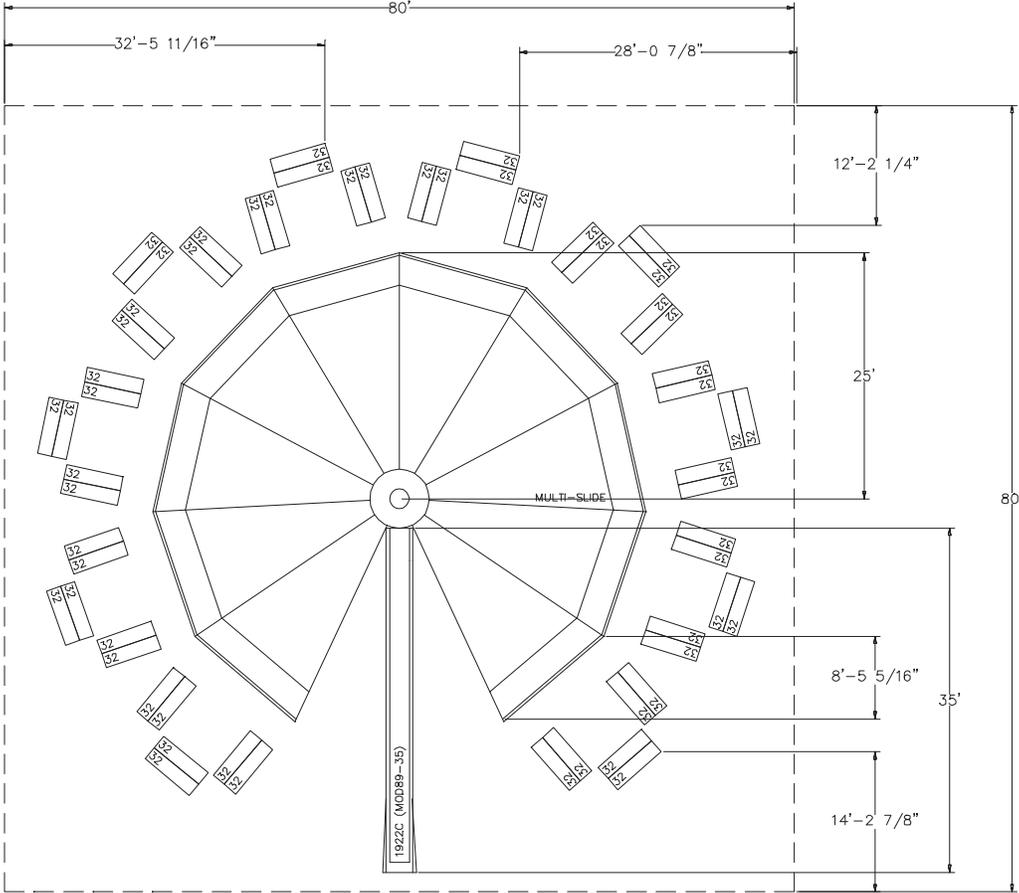


Exhibit 471d
471004, Manual Sack Sort — Sawtooth (15 Separations)

Date: Dec. 1994
Distribution Sacks
Scale: No Scale
Area: 1,645 Sq Ft

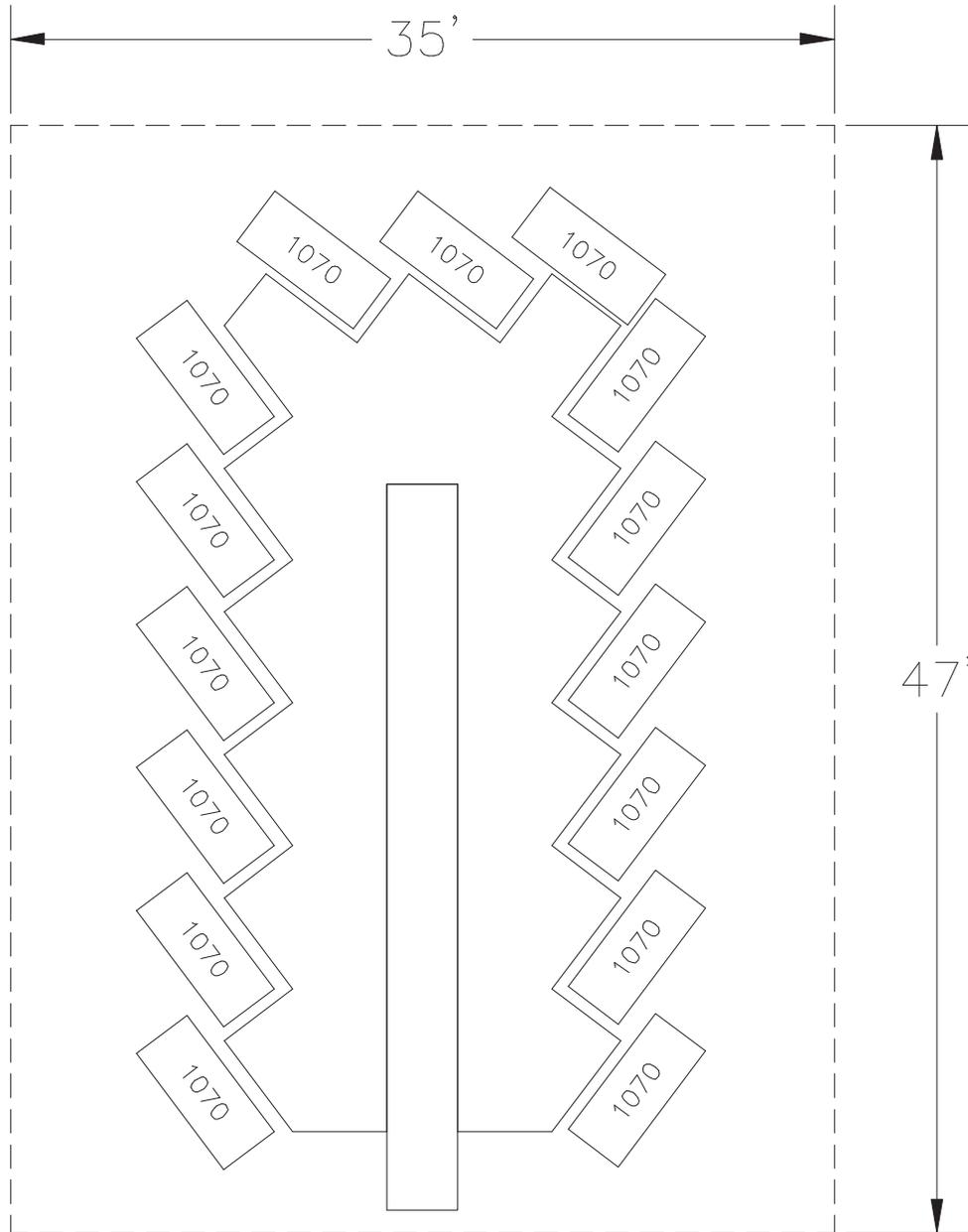


Exhibit 471e
471005, Universal Sorting System: 5,000 Sq Ft

Date: May 1997
 Universal Sorting System — Outsides, Sacks, and Trays
 Scale: No Scale
 Area: 5,000 Sq Ft

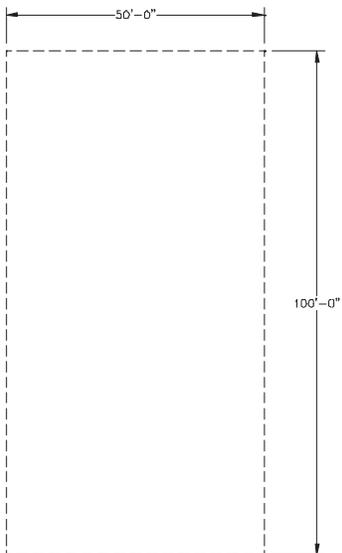


Exhibit 471f
471006, Universal Sorting System: 10,000 Sq Ft

Date: May 1997
 Universal Sorting System — Outsides, Sacks, and Trays
 Scale: No Scale
 Area: 10,000 Sq Ft

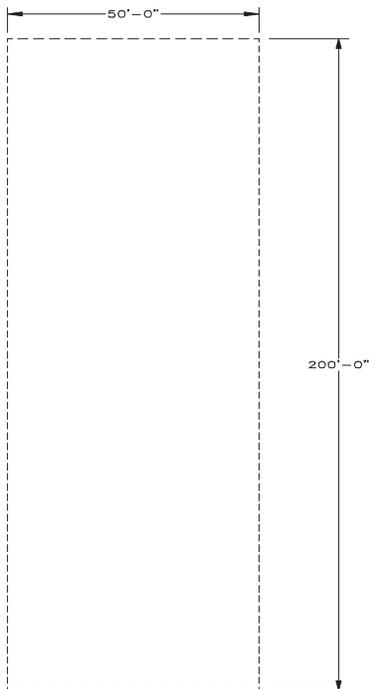


Exhibit 471g
471007, Universal Sorting System: 15,000 Sq Ft

Date: May 1997
Universal Sorting System — Outsides, Sacks, and Trays
Scale: No Scale
Area: 15,000 Sq Ft

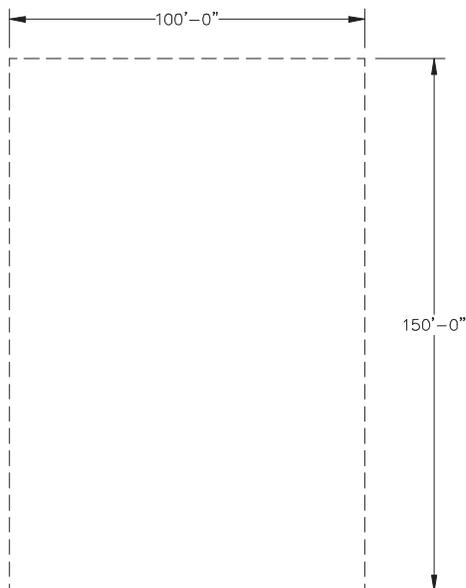
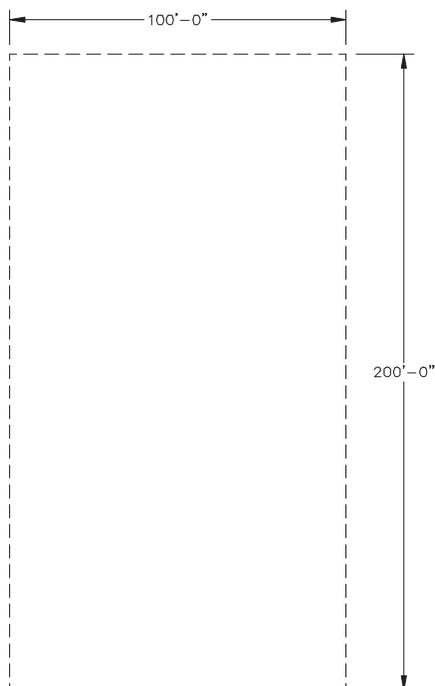


Exhibit 471h
471008, Universal Sorting System: 20,000 Sq Ft

Date: May 1997
Universal Sorting System — Outsides, Sacks, and Trays
Scale: No Scale
Area: 20,000 Sq Ft



472 Robotics, Letters and Flats Sleaving and Banding, and Letters and Flats Scan-Where-You-Band

Exhibit 472a lists the WSUs currently used for robotics, sleaving and banding, and scan-where-you-band. Exhibits 472b and 472c illustrate the WSUs for visual reference in planning facility space requirements for robotics. Exhibits 472d and 472e illustrate the WSUs for sleaving and banding of letters and flats. Exhibits 472f and 472g illustrate the WSUs for letter and flat scan-where-you-band activities.

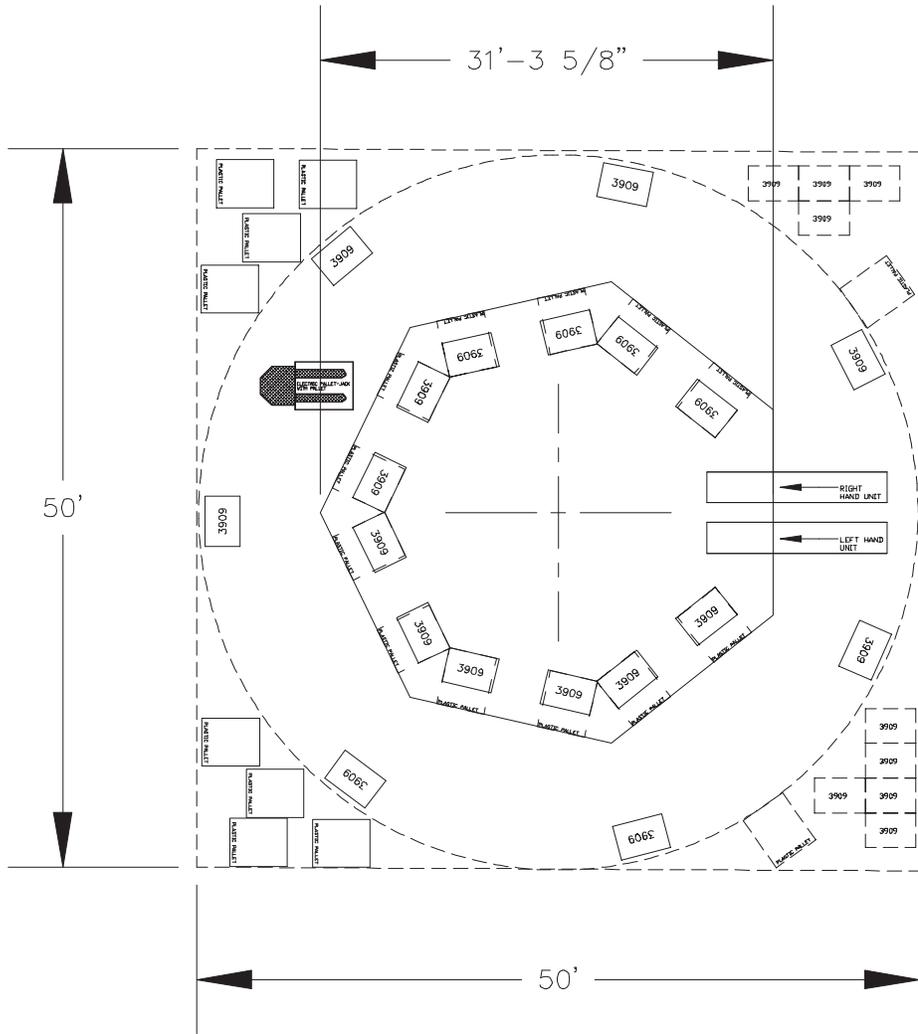
Exhibit 472a

WSUs Used for Robotics, Sleaving and Banding, and Scan-Where-You-Band

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Description |
|------------|------------------------|----------------------|-------------------------------|
| 472001 | 472001.DWG | 2,500 | Pedestal Robot (Phase I) |
| 472002 | 472002.DWG | 1,550 | Gantry Robot (Single) |
| 472003 | 472003.DWG | 2,500 | Gantry Robot (Dual) |
| 472004 | 472004.DWG | 336 | Letter Auto-Sleever and Strap |
| 472005 | 472005.DWG | 154 | Flat Sleever and Strap |
| 472006 | 472006.DWG | 818 | Letter Scan-Where-You-Band |
| 472007 | 472007.DWG | 330 | Flat Scan-Where-You-Band |

Exhibit 472b
472001, Pedestal Robot (Phase I)

Date: Sept. 1997
Pedestal Robot Trays
Scale: No Scale
Area: 2,500 Sq Ft



Note: The WSU 472001 reflects an initial buy of 100 units. There shouldn't be any additional quantities.

Exhibit 472c
472002, Gantry Robot (Single)

Date: Sept. 1997
Gantry Robot Trays
Scale: No Scale
Area: 1,550 Sq Ft

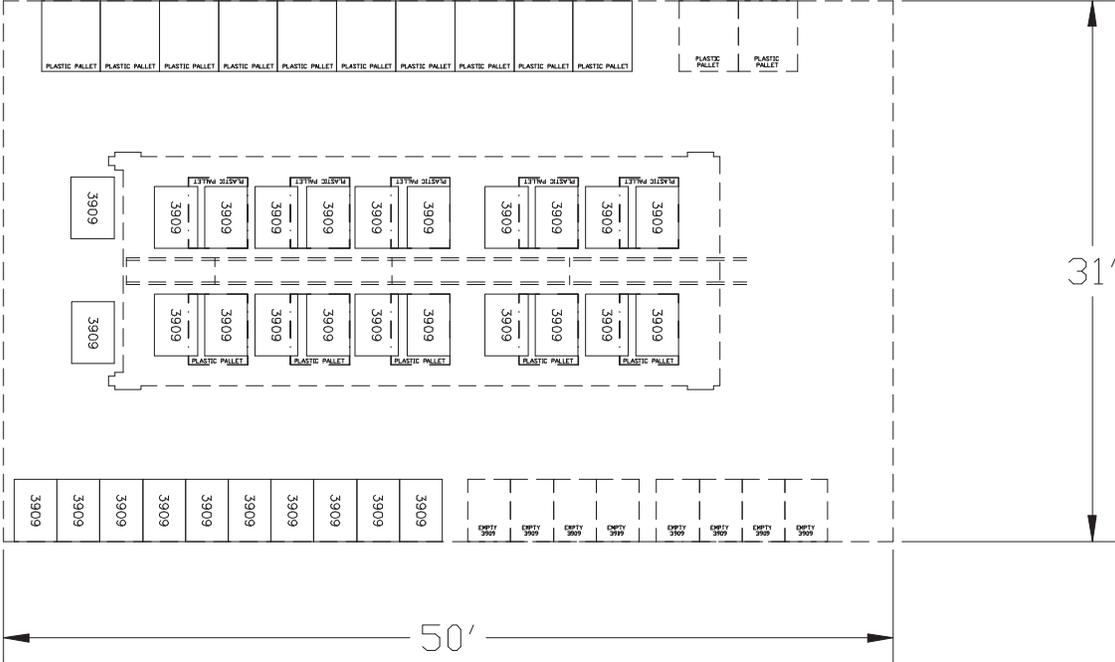


Exhibit 472d
472003, Gantry Robot (Dual)

Date: Sept. 1997
Dual Gantry Robot Trays
Scale: No Scale
Area: 2,500 Sq Ft

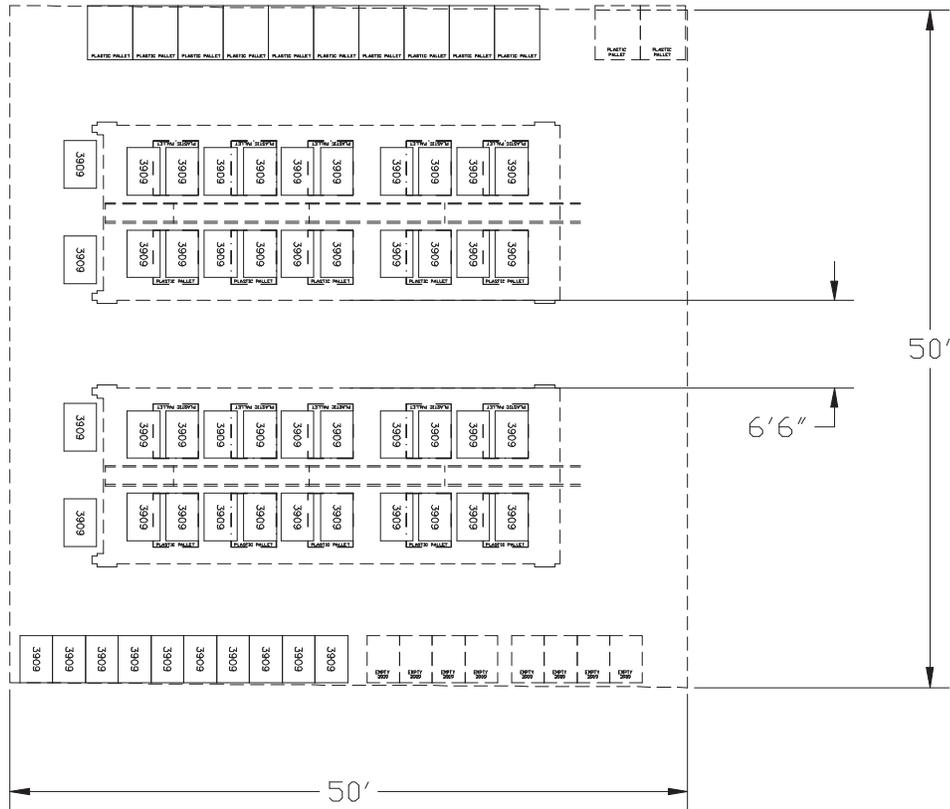


Exhibit 472e
472004, Letter Auto-Sleever and Strap

Date: Sept. 1997
Auto-Sleeve and Strap Letter Trays
Scale: No Scale
Area: 336 Sq Ft

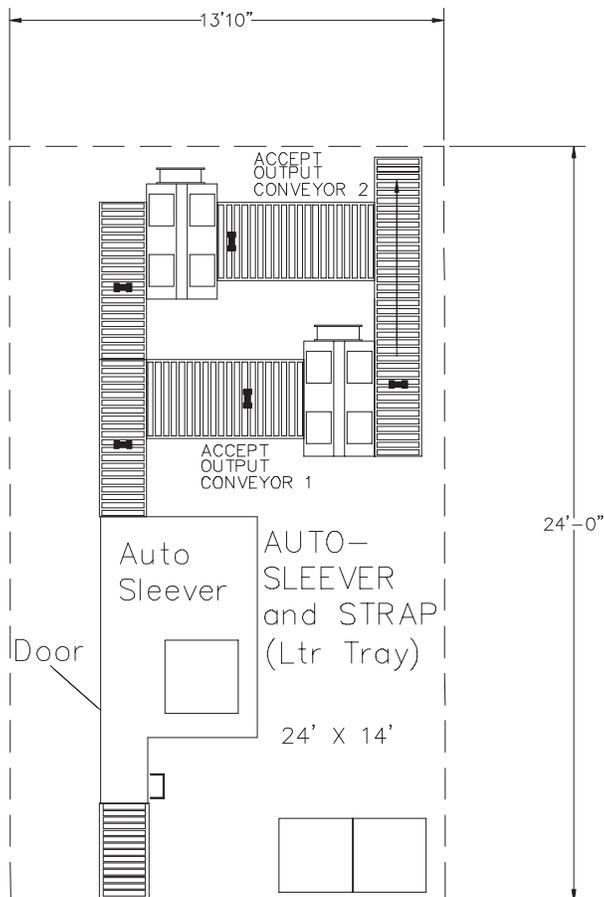


Exhibit 472f
472005, Flat Sleever and Strap

Date: Sept. 1997
Sleeve and Strap Flat Trays
Scale: No Scale
Area: 154 Sq Ft

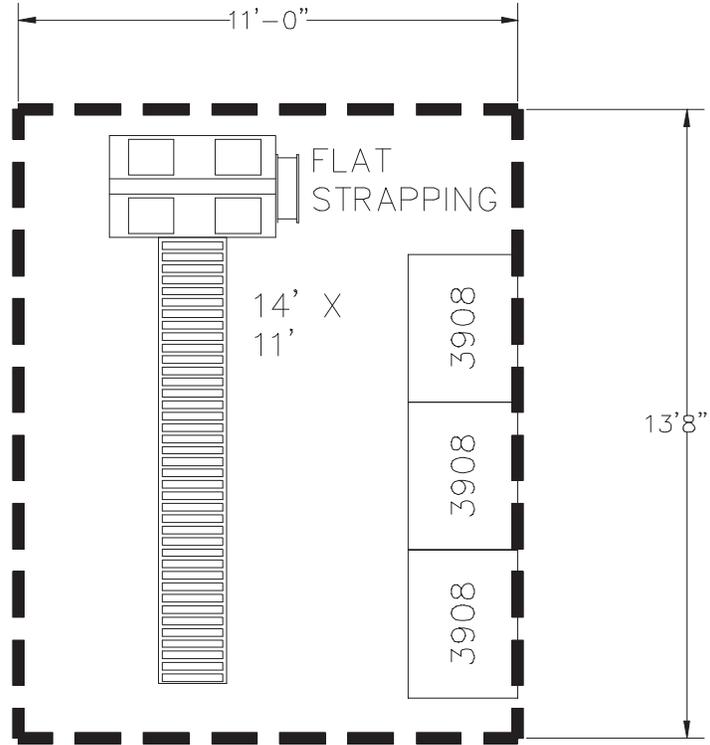


Exhibit 472g
472006, Letter Scan-Where-You-Band

Date: Sept. 1997
Scan-Where-You-Band Letter Trays
Scale: No Scale
Area: 818 Sq Ft

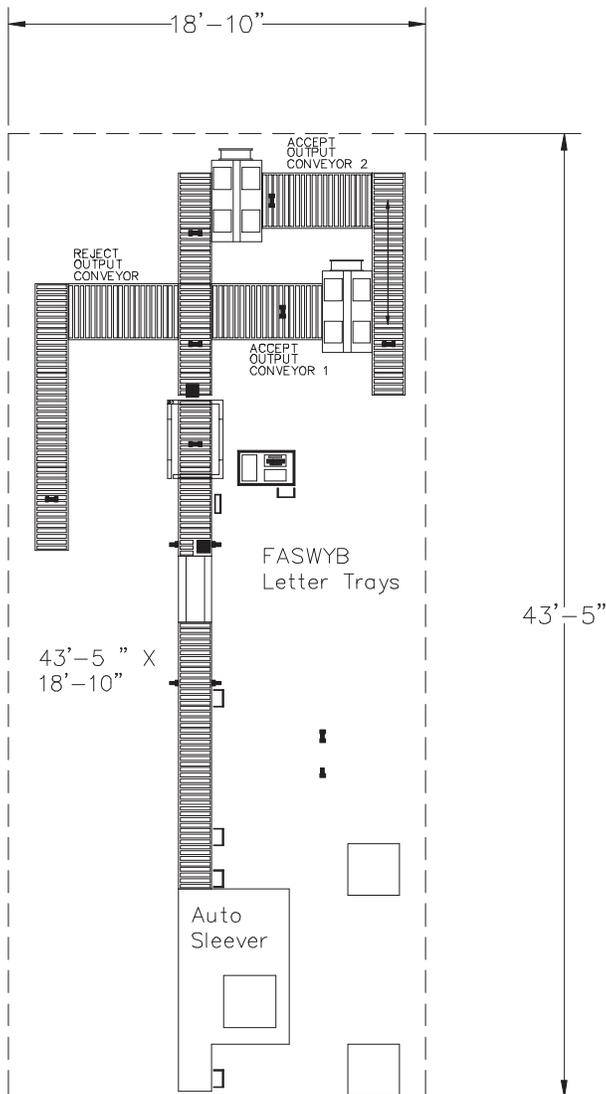
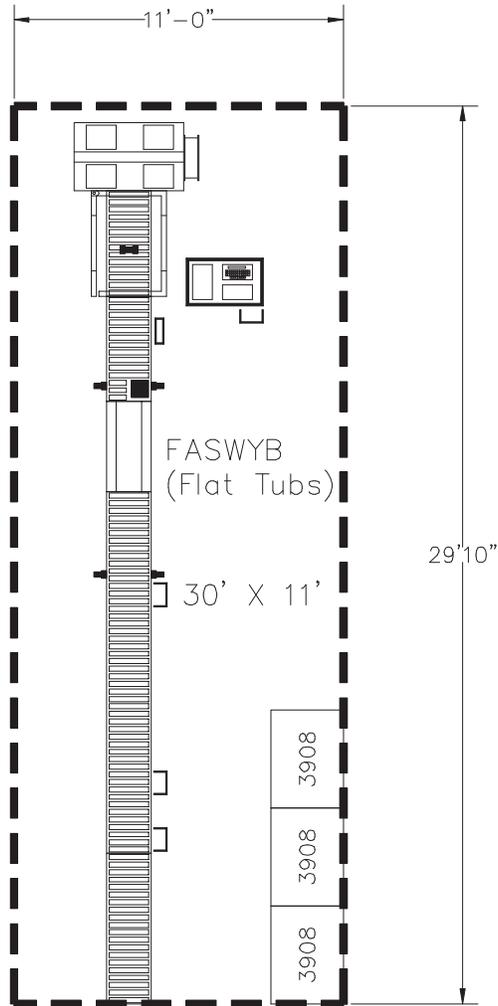


Exhibit 472h
472007, Flat Scan-Where-You-Band

Date: Sept. 1997
Scan-Where-You-Band Flat Trays
Scale: No Scale
Area: 330 Sq Ft



473 **Reserved**474 **Reserved**475 **Platform Material Handling Equipment**

Exhibit 475 lists the material handling equipment used on the platform.

Exhibit 475

Platform Material Handling Equipment

| Item Number | Description |
|--------------------|---------------------|
| 1033 | Small Canvas Hamper |
| 1046 | Large Canvas Hamper |
| 1070 | Large Nutting Truck |
| 1074 | Small Nutting Truck |

476 **Platform Vestibule**

The footprint of the platform vestibule provides for movement of mail and personnel between the platform and the workroom floor. Exhibit 476a lists the WSU for the platform vestibule. Exhibit 476b illustrates the platform vestibule for visual reference in planning facility space requirements. The vestibule is no longer included in the construction of new facilities or in the renovation of existing ones.

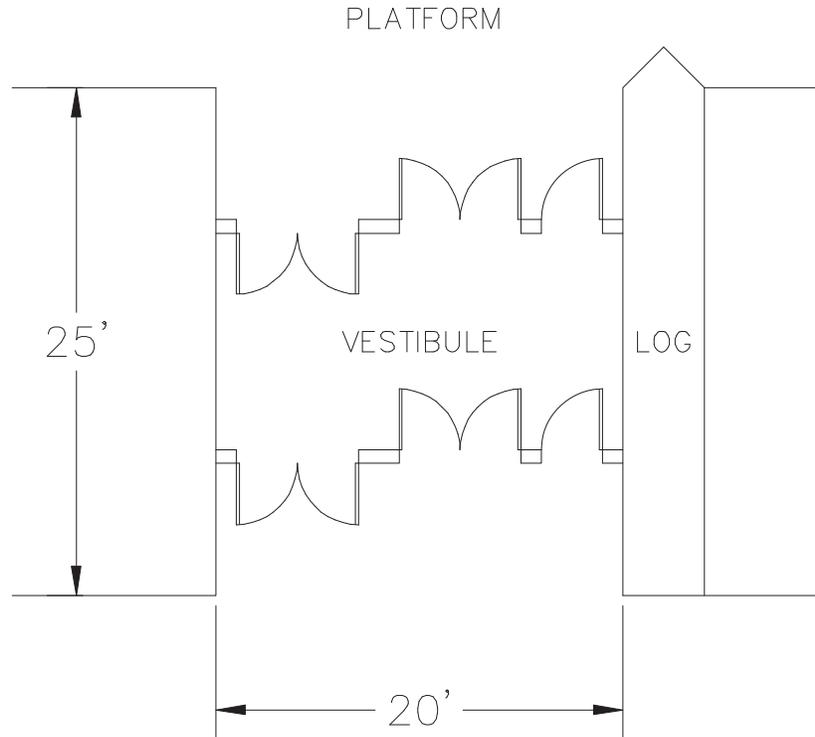
Exhibit 476a

WSU Used for Platform Vestibule

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Description |
|-------------------|-------------------------------|-----------------------------|---|
| 476001 | 476001.DWG | 500 | Mailing Platform Vestibule, Entrance and Exit |

Exhibit 476b
476001, Platform Vestibule Entrance and Exit

Date: Dec. 1994
 Platform Vestibule
 Scale: No Scale
 Area: 500 Sq Ft



477 **Reserved**

478 **Reserved**

479 **Reserved**

48 CFS Operations

481 **Reserved**

482 **CFS Space**

The footprints of the CFS units provide for movement of mail and personnel within the work center, exclusive of dedicated aisles, and an allowance for column interference and other unusable space. Exhibit 482a lists the WSUs currently used for CFS units. Exhibits 482b through 482f illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 482a
WSUs Used for CFS Units

| WSU Number | PostalCAD Drawing Name | Size of CFS Unit | Number of Mechanized Terminals | Number of Nonmechanized Terminals | Dimensions | Square Feet Required |
|------------|------------------------|------------------|--------------------------------|-----------------------------------|------------|----------------------|
| 482001 | 482001.DWG | Small | 2 | 2 | 60' x 50' | 3,000 |
| 482002 | 482002.DWG | Medium | 4 | 4 | 75' x 60' | 4,500 |
| 482003 | 482003.DWG | Medium-Large | 6 | 6 | 100' x 65' | 6,500 |
| 482004 | 482004.DWG | Large | 7 | 7 | 105' x 85' | 8,925 |
| 482005 | 482005.DWG | Jumbo | 9 | 11 | 115' x 87' | 10,000 |

Exhibit 482b
482001, Small CFS Unit

Date: Dec. 1994
 CFS
 Scale: No Scale
 Area: 3,000 Sq Ft

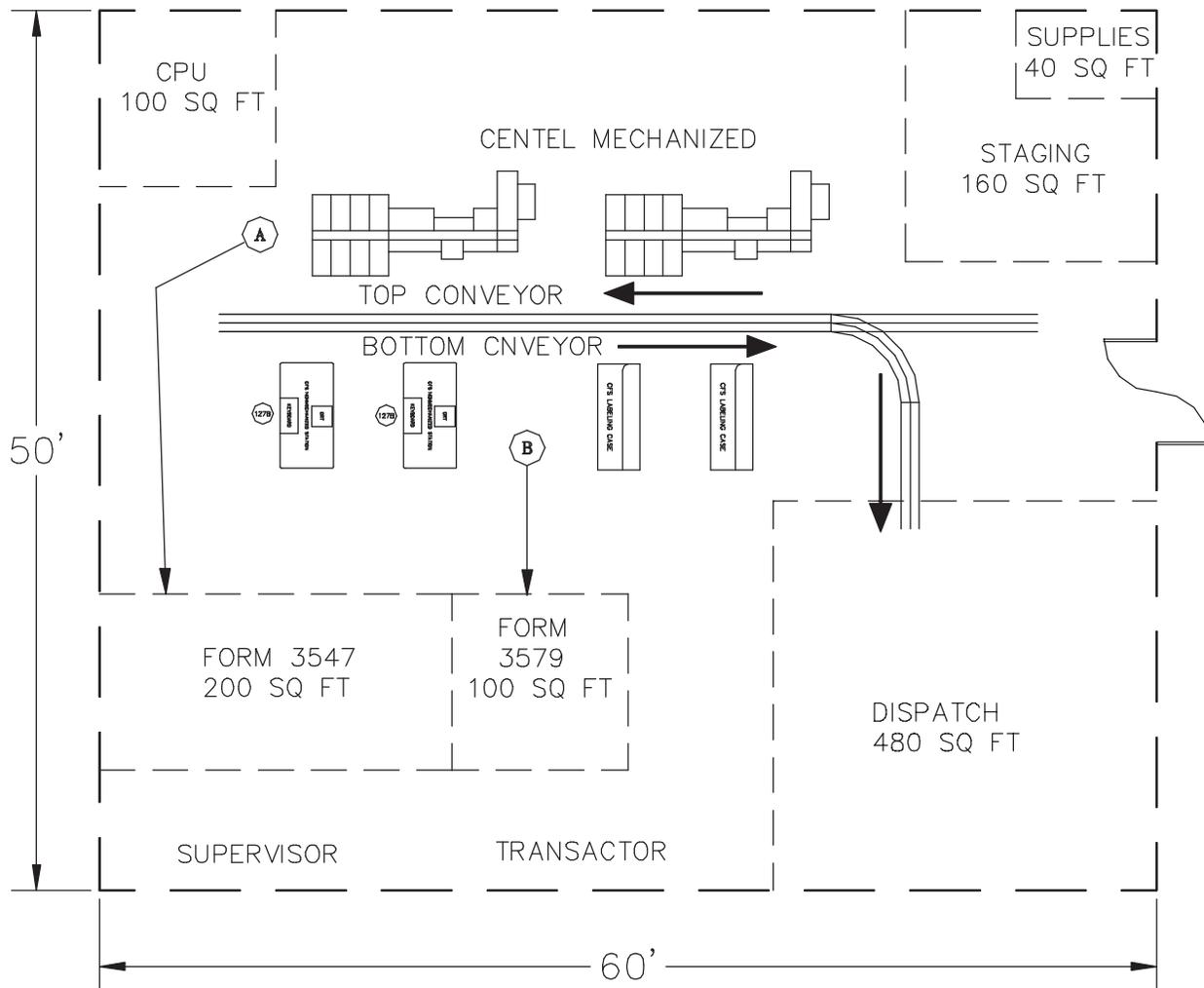


Exhibit 482c
482002, Medium CFS Unit

Date: Dec. 1994
CFS
Scale: No Scale
Area: 4,500 Sq Ft

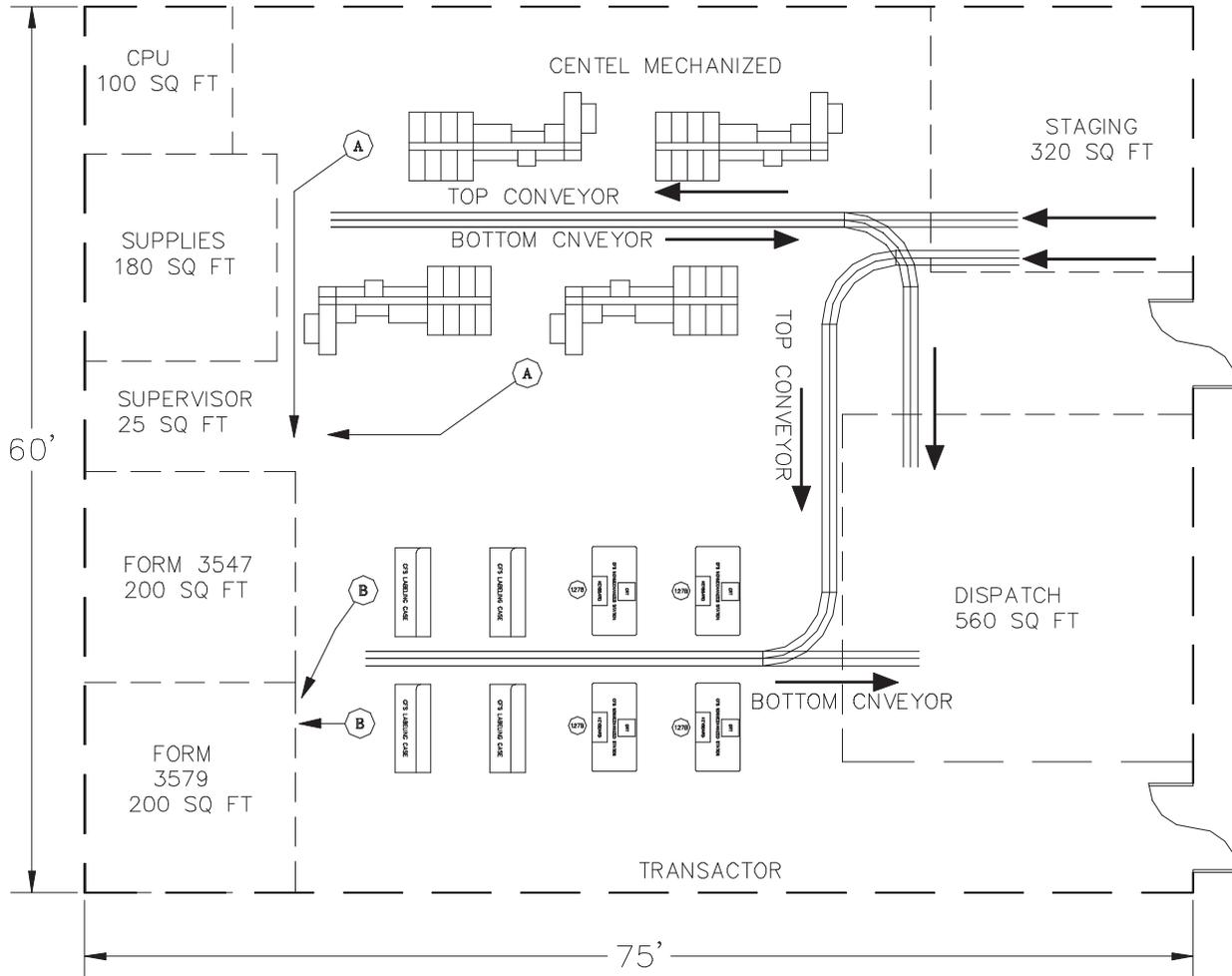


Exhibit 482d
482003, Medium-Large CFS Unit

Date: Dec. 1994
CFS
Scale: No Scale
Area: 6,500 Sq Ft

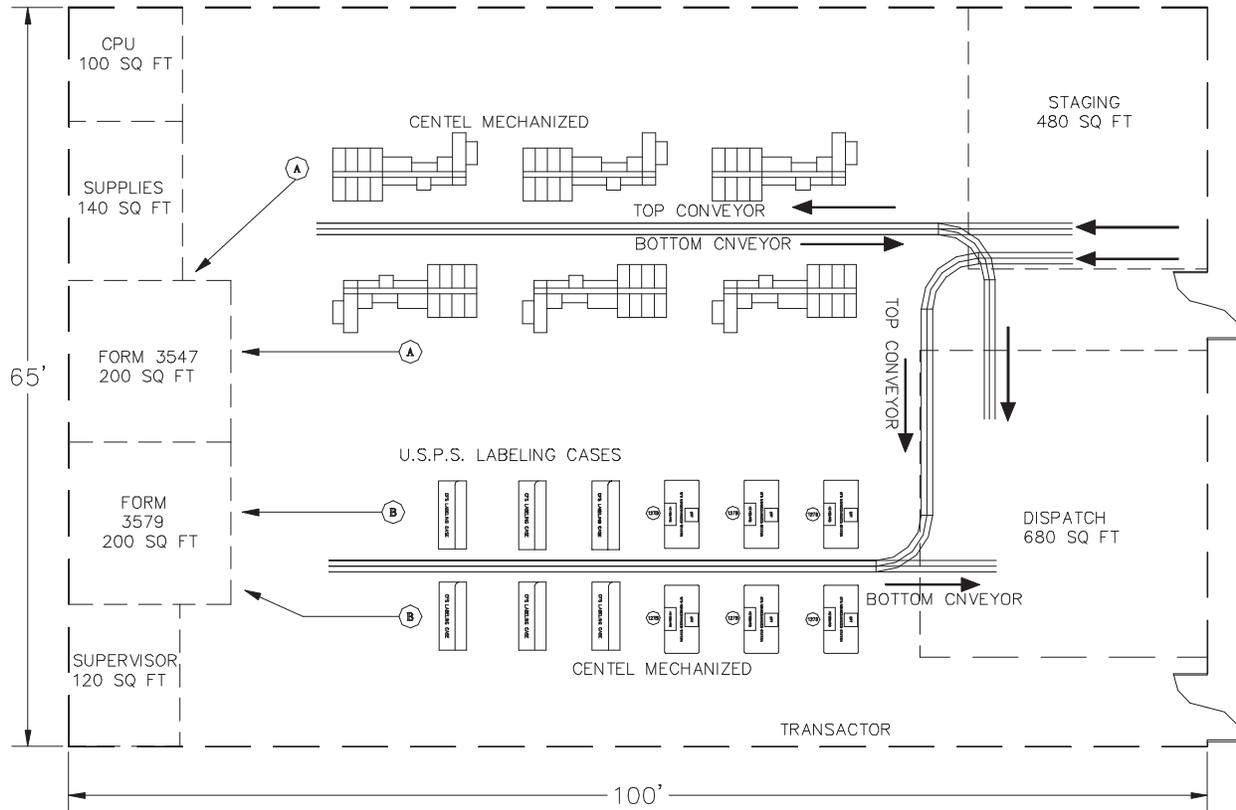


Exhibit 482e
482004, Large CFS Unit

Date: Dec. 1994
CFS
Scale: No Scale
Area: 8,925 Sq Ft

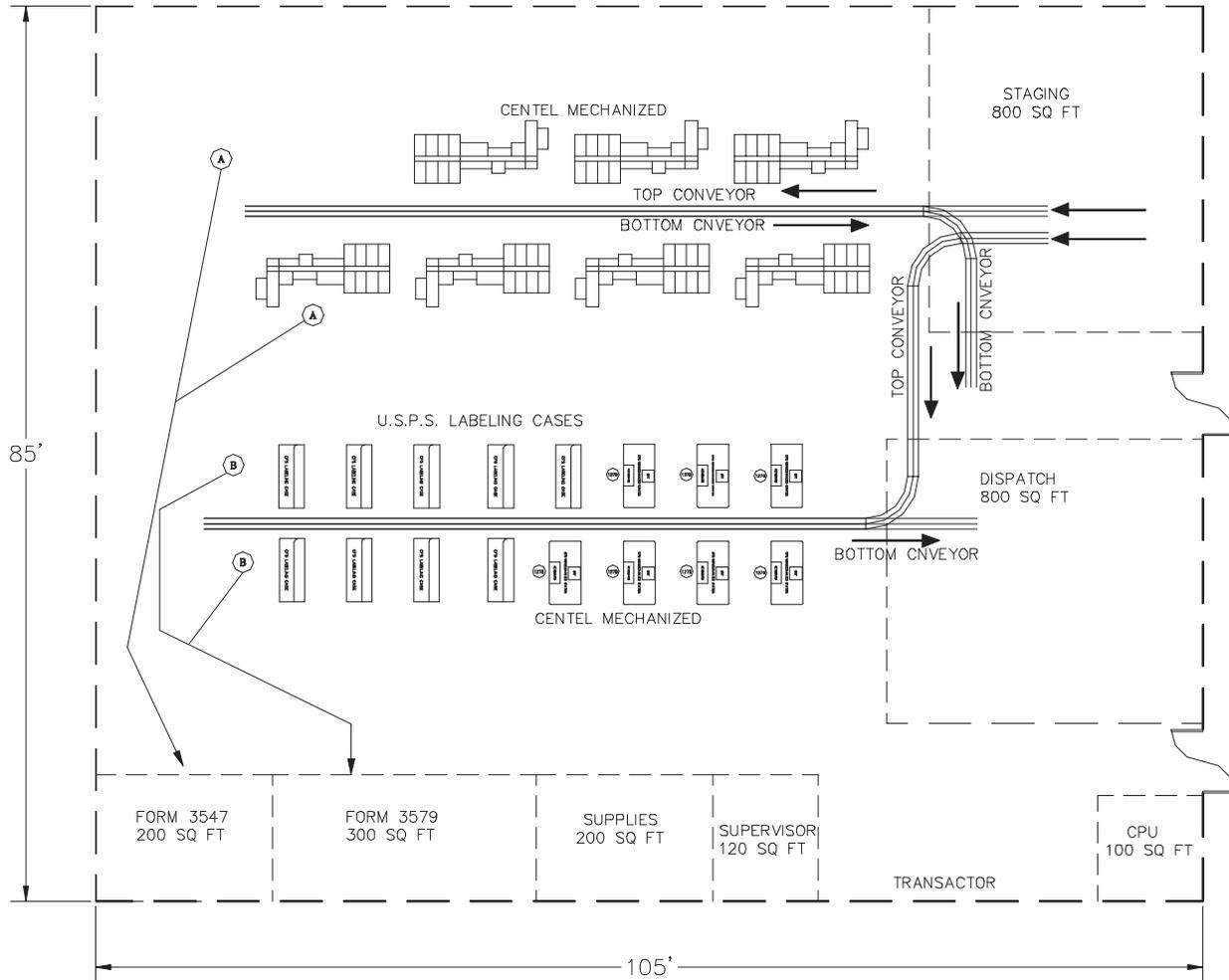
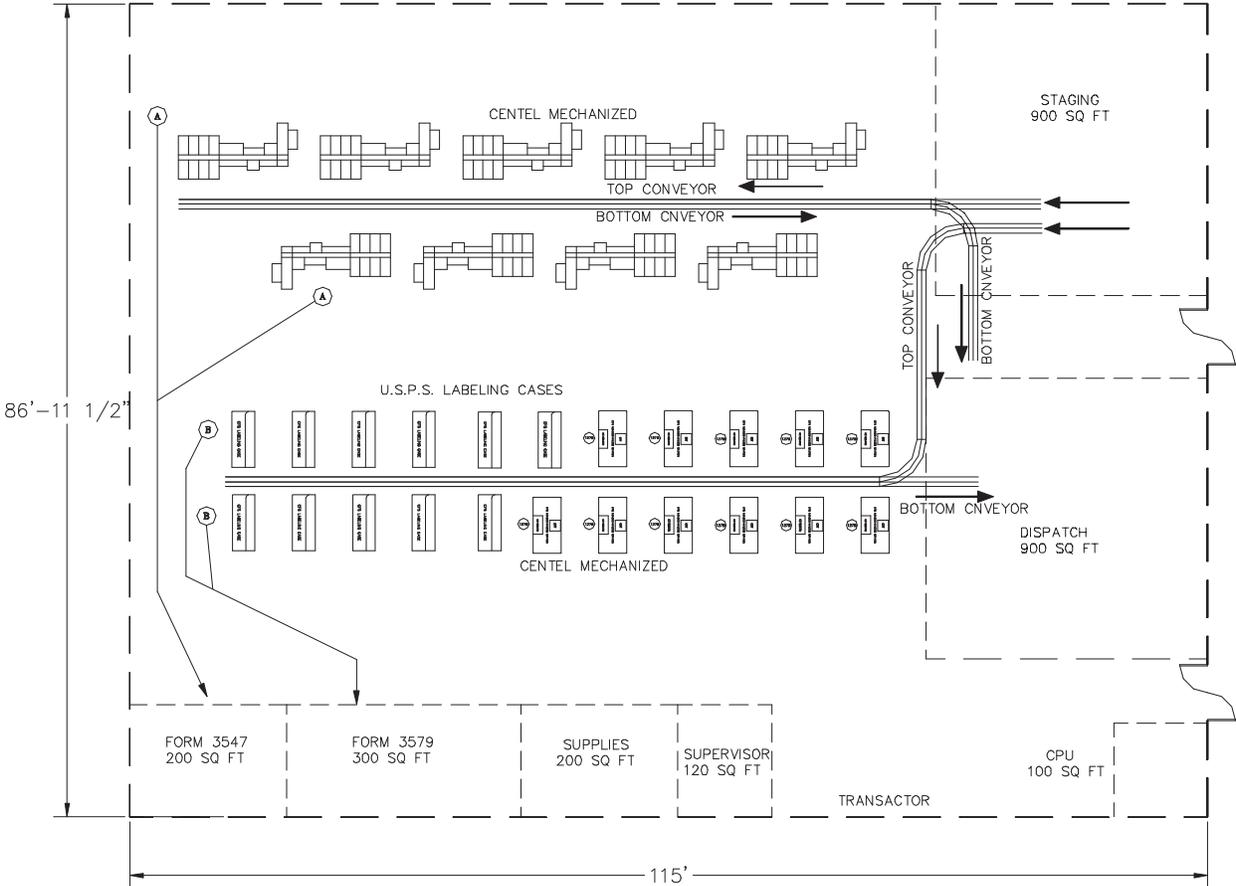


Exhibit 482f
482005, Jumbo CFS Unit

Date: Dec. 1994
CFS
Scale: No Scale
Area: 10,000 Sq Ft



49 Office and Clerical Operations

491 **Reserved**

492 **Reserved**

493 **Administrative Offices**

Exhibit 493a lists the WSUs currently used for developing administrative office space. Exhibits 493b through 493f illustrate these WSUs for visual reference in planning facility space requirements.

Exhibit 493a

WSUs Used for Administrative Office Space Requirements

| WSU Number | PostalCAD Drawing Name | Square Feet Required | Position |
|------------|------------------------|----------------------|---|
| 493001 | 493001.DWG | 270 | Vice President of Area Operations |
| 493002 | 493002.DWG | 220 | District Manager |
| | | 220 | Postal Career Executive Service (PCES) Postmaster |
| | | 220 | PCES Plant Manager |
| | | 220 | PCES Air Mail Center (AMC) Manager |
| | | 220 | PCES Air Mail Center (AMC) Manager |
| 493003 | 493003.DWG | 180 | Executive and Administrative Schedule (EAS) Plant Manager Processing and Distribution Center (P&DC) |
| 493004 | 493004.DWG | 160 | PCES Office Manager |
| | | 160 | EAS Postmaster |
| | | 160 | EAS Plant Manager Processing and Distribution Facility (P&DF) |
| | | 160 | EAS AMC or Air Mail Facility (AMF) Plant Manager |
| | | 160 | EAS Manager (Direct Report to District Manager or P&DC Plant Manager) |
| 493005 | 493005.DWG | 120 | Manager of Customer Services |
| | | 120 | EAS Manager (Direct Report to Plant Manager P&DF) |
| | | 120 | Supervisor (If Private Office Is Required) |

Exhibit 493b
493001, Vice President of Area Operations

Date: Dec. 1994
 Private Offices
 Scale: No Scale
 Area: 270 Sq Ft

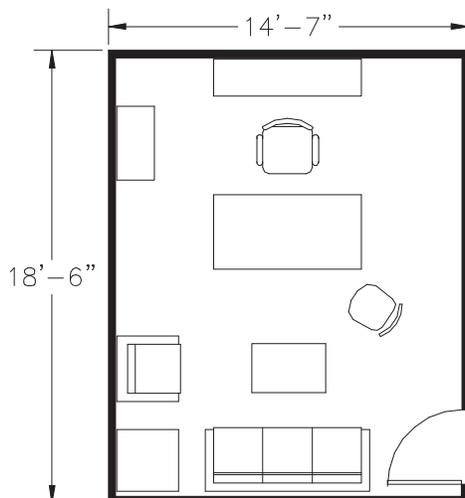


Exhibit 493c
493002, District Manager, PCES Postmaster, PCES Plant Manager, or PCES AMC Manager

Date: Dec. 1994
 Private Offices
 Scale: No Scale
 Area: 220 Sq Ft

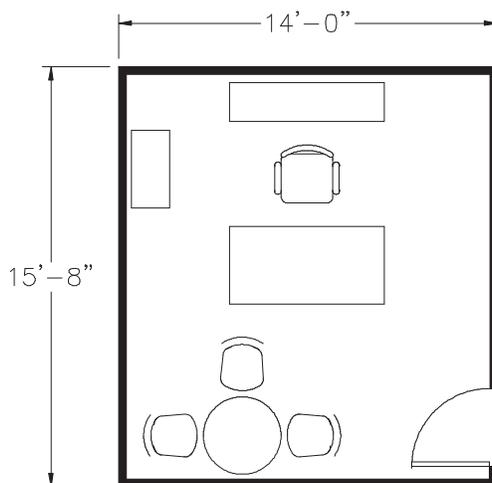


Exhibit 493d
493003, EAS Plant Manager (P&DC)

Date: Dec. 1994
 Private Offices
 Scale: No Scale
 Area: 180 Sq Ft

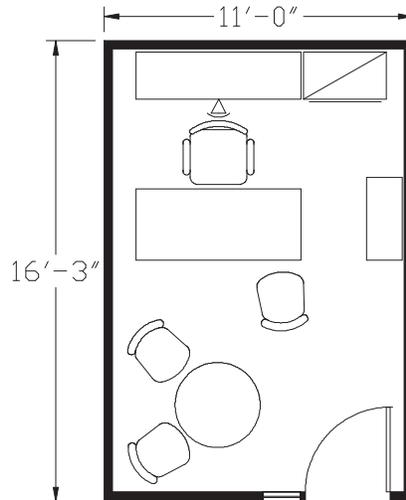


Exhibit 493e
493004, PCES Office Manager, EAS Postmaster, EAS Plant Manager (P&DF), EAS AMC/AMF Plant Manager, or EAS Manager (Direct Report to District Manager or P&DC Plant Manager)

Date: Dec. 1994
 Private Offices
 Scale: No Scale
 Area: 160 Sq Ft

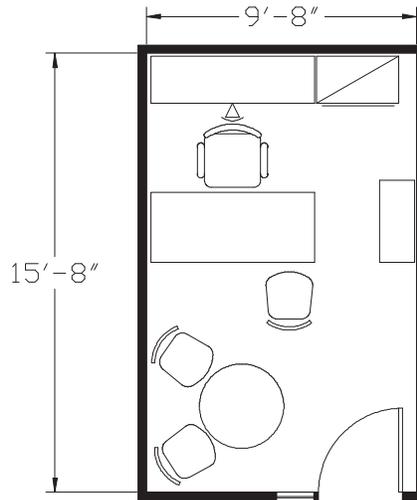


Exhibit 493f
**493005, Manager of Customer Services, EAS Manager (Direct Report to Plant Manager P&DF),
Supervisor (If Private Office Is Required)**

Date: Dec. 1994
Private Offices
Scale: No Scale
Area: 120 Sq Ft

