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AMDAHL 470
Computing Systems
Physical Planning Manual

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REVISION NOTICE

This is the fourth edition. This revision adds information about PDU (MOD V) and Extended Channels feature (dual Channel Units). Also, raised-floor tile cutout dimensions have been clarified.

ABSTRACT

This manual contains the physical and environmental information necessary to prepare facilities for an Amdahl 470V/5, V/5-II, V/6, V/6-II, V/7, V/7A, V/7B, V/7C, and V/8 computing system as well as the Hardware Measurement Interface (HMI) and Extended Channels feature options. Included are acceptable temperature, humidity, and altitude ranges; cooling requirements; dimensions of frames; power, wiring, and cable requirements; and scale layouts of all configurations, with matching raised-floor tile cutout diagrams.

READER COMMENT FORM

A reader comment form is provided at the end of this manual. If this form is not available, comments and suggestions may be sent to Amdahl Corporation, Technical Publications Department, Mail Stop 323, P.O. Box 470, Sunnyvale, CA 94086. All comments and suggestions become the property of Amdahl Corporation.

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INTRODUCTION

The Amdahl 470 computing systems (figure 1) provide high-speed, general-purpose computing capabilities for sophisticated business and scientific applications.

This manual contains the physical and environmental information required to prepare your facilities for an Amdahl 470 computing system. The Amdahl 470 family includes the V/5, V/5-II, V/6, V/6-II, V/7, V/7A, V/7B, V/7C, and V/8. The Hardware Measurement Interface (HMI) and the Extended Channel Configuration are optional features available on the V/7 and V/8 systems. The manual contains specific data on temperature and humidity, and indicates requirements for cooling, power, cables, and console data set. In addition, it includes all dimensions that pertain to floor space, as well as dimensions and positions of raised-floor tile cutouts.

Proper preparations of your facilities helps Amdahl to install your system and to serve you efficiently. If you have any questions, contact your Amdahl installation planning representative.

SYSTEM EXTERIOR ENVIRONMENTS

The air surrounding the Amdahl 470 computing system hardware must meet certain specifications. The acceptable temperature and humidity ranges for the three environments that a system can encounter (shipping or storage, operating, and non-operating) are indicated in figures 2 and 3. The next section, "System Cooling," discusses the requirements to cool the interior portions of the system.

Systems shipped or stored at extreme temperatures may require several days to adjust to normal operating temperatures. If immediate start-up is desired, the system must be shipped and stored in an operating environment for 48 hours.

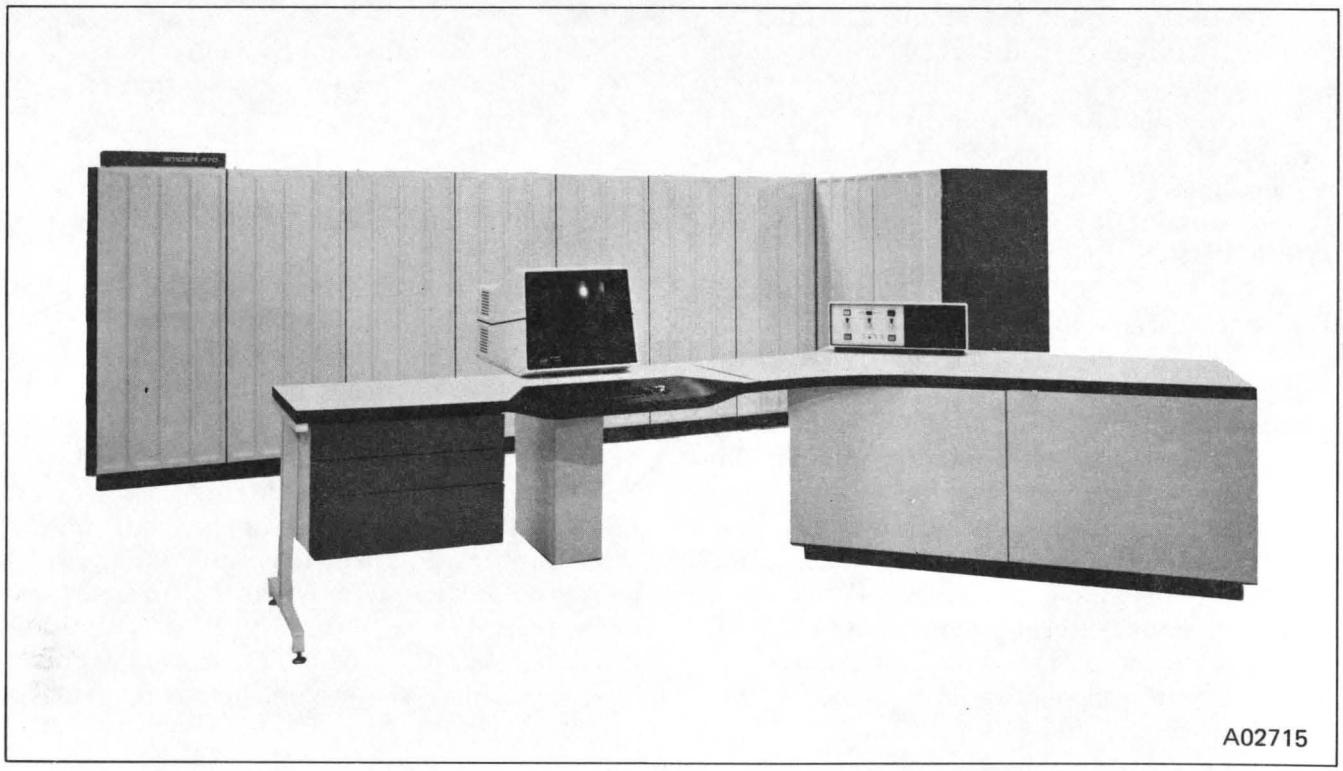

Figure 1. Typical Amdahl 470 Computing System

CAUTION

The Amdahl 470 Computing System must never be exposed to conditions that could cause condensation of moisture to occur within the system.

Long term storage with the system exposed to humidity of over 80 percent is not recommended. Consult Amdahl for guidelines when storing, packaging, or moving computer equipment.

SYSTEM COOLING

All components of the Amdahl 470 computing system are air cooled. Cool air is introduced from beneath the frames, distributed by a push-pull fan arrangement, and exhausted through the top of the frames. The raised floor under the system must distribute cool air at the areas shown as air intakes in the section "System Configurations." All air conditioning equipment should be in place, tested, and ready for operation prior to system installation. Refer to table 1 to locate the required cooling air flow (in cubic feet per minute) for the particular system configuration. Also included in table 1 is the heat dissipation value (in BTU per hour) for the selected system configuration. This value represents the amount of heat that the power supplies (and other circuits) generate within that configuration.

The specifications identified as V/5, V/6 and V/7, V/8 provide data for only the three associated basic frames. Also provided is specification data for unique MSU and PDU configurations, Console and the optional Extended Channel frame. For the total requirements of the system configuration selected, simply add up the applicable specification figures. For example, an Amdahl 470V/8 with sixteen megabyte storage capacity and a MOD V PDU (with no option) will dissipate 130,460 BTU per hour and require 6,230 cubic feet per minute of cooling air flow.

Air at the floor intakes must have a positive pressure and meet the specifications given in table 2. Under-floor air must be maintained at different temperature and humidity ranges than exterior air and must be uniformly distributed through the under-floor system. Figures 2 and 3 illustrate the system operating range as determined using the temperature – relative humidity chart.

Air Filtration

Air supplied to the computer room should be filtered. Special considerations are required when the installation is exposed to corrosive gasses, salt air, or abnormal amounts of dust. A mechanical air filter in a closed air conditioned area should be rated at a minimum of 20 percent efficiency by the Bureau or Standards discoloration test for atmospheric dust; an electrostatic plate air filter for air brought into the air conditioned area should be rated at a minimum of 85 to 90 percent efficiency.

CAUTION

Failure to adhere to Amdahl specifications may lead to degradation of system performance.

SYSTEM FEATURE OPTIONS

The 470V/7 and V/8 option feature Extended Channels is included on tables 1, 6 and 7. The Extended Channel scale layout is illustrated after the system layout diagrams.

The 470V/7 and V/8 option feature Hardware Measurement Interface (HMI) is not included in table 1 because the impact on system environmental specifications is negligible. The HMI optional feature frame is described in the V/7 and V/8 weights and measures tables. The HMI scale layout is illustrated after the system layout diagrams.

	Shipping or Storage	Operating	Nonoperating
Temperature Range	–30° to 60°C	16° to 32°C	10° to 43°C
Relative Humidity	5% to 100%	30% to 70%	10% to 80%
Max Wet Bulb Temp	————	26°C	————
* No Condensation			

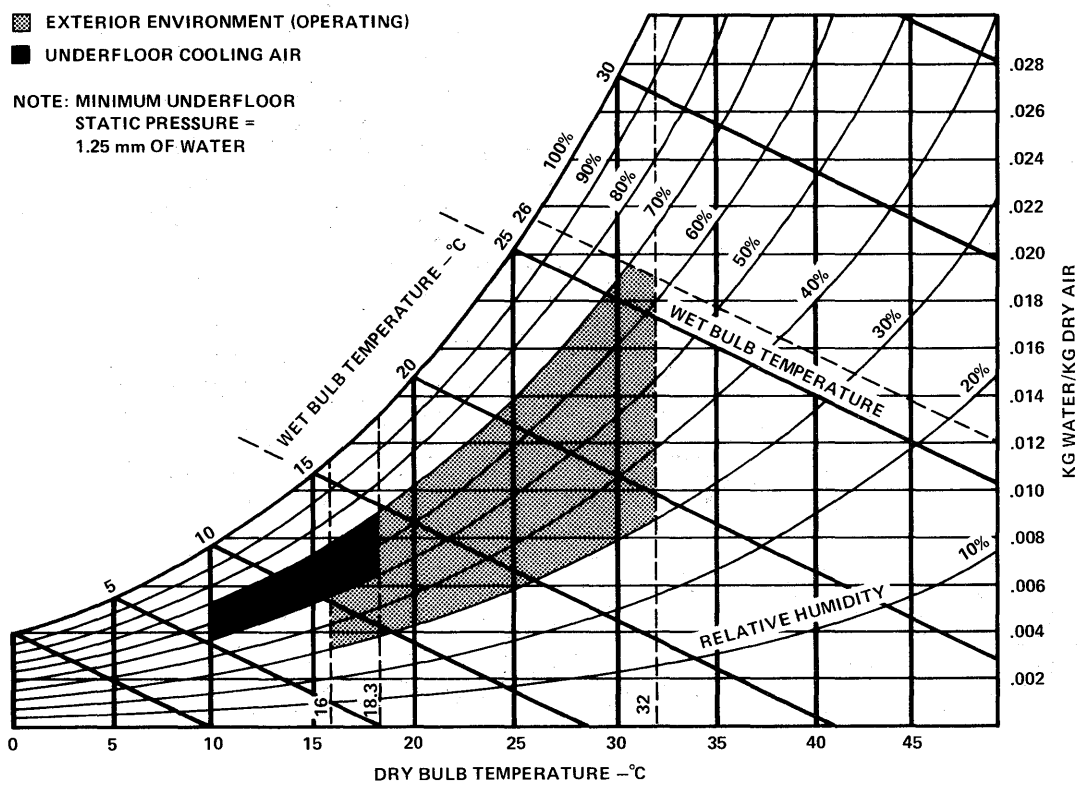

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Figure 2. Environmental Specifications (Metric)

	Shipping or Storage	Operating	Nonoperating
Temperature Range	–22° to 140° F	60° to 90°F	50° to 110°F
Relative Humidity	5% to 100%	30% to 70%	10% to 80%
Max Wet Bulb Temp	————	78°F	————
* No Condensation			

EXTERIOR ENVIRONMENT (OPERATING)

UNDERFLOOR COOLING AIR

NOTE: MAXIMUM UNDERFLOOR STATIC PRESSURE = .05 INCHES OF WATER

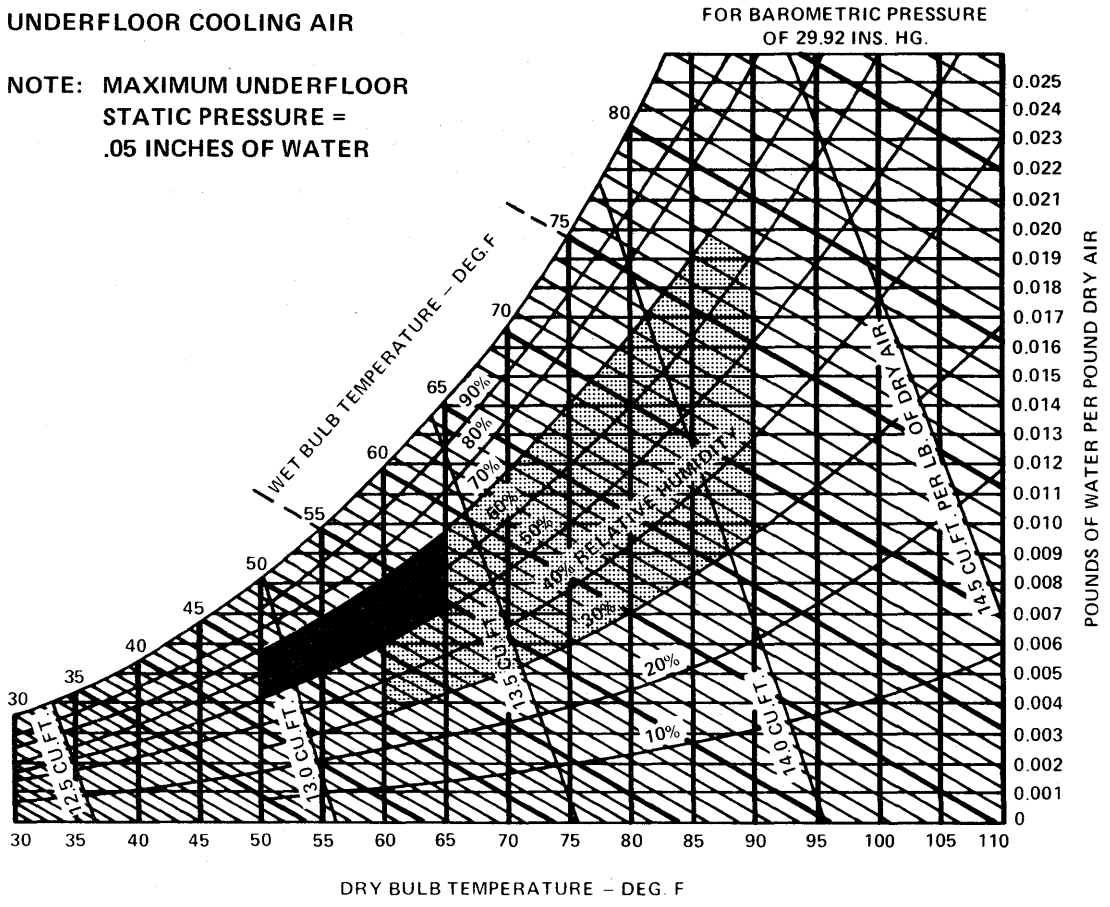

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Figure 3. Environmental Specifications (American Standard)

Table 1. Cooling Air Volume and Heat Dissipation Specifications

AMDAHL 470 COMPUTING SYSTEM	STORAGE CAPACITY	COOLING AIR VOLUME	UNIT HEAT DISSIPATION
	MEGABYTES	CFM	BTU/HR
V/5, V/6 (CPU, EUP, CHAN)	0	3,990	60,200
MSU MOD II (Main Storage Unit)	2	1,420	37,000
	3	2,840	65,000
	4	2,840	75,000
	5	4,260	102,000
	6	4,260	112,000
	7	5,680	140,000
	8	5,680	150,000
MSU MOD III (Main Storage Unit)	2	1,210	14,000
	3	2,420	24,000
	4	2,420	27,000
	5	3,630	37,000
	6	3,630	41,000
	7	4,840	51,000
	8	4,840	54,000
MSU MOD VI (Main Storage Unit, Both VIA and VIB)	4	900	14,000
	6	900	20,000
	8	900	24,000
	12	1,800	38,000
	16	1,800	48,000
V/7, V/8 (CPU, SCU, CHAN)	0	4,430	94,200
MSU MOD VIIA (Main Storage Unit)	4	900	14,000
	6	900	20,000
	8	900	24,000
MSU MOD VIIB (Main Storage Unit)	4	900	10,000
	8	900	14,000
	12	1,800	20,000
	16	1,800	24,000
Console	–	–	3,760
Power Distribution Unit Mod I thru IV	–	–	4,800
MOD V	–	–	8500
Extended Channel (Additional Chan)	–	475	10,480

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Table 2. Under-Floor Cooling Air Specifications

ENVIRONMENTAL CHARACTERISTIC	VALUE
Temperature Range	50° to 65° F (10° to 18° C)
Optimum Temperature	60°F (16°C)
Under Floor Static Pressure	0.05 inches of water optimum
Relative Humidity Range	50% to 70%
Altitude Range	For altitudes from 3,000 to 7,000 feet, the maximum air temperature is decreased 3.6° F (2.0° C) for each 1,000 feet above 3,000 feet.

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SYSTEM POWER

Power must be available to the Amdahl 470 power distribution unit (PDU) at the time of installation. The PDU requires two power sources (208-Vac, 415-Hz, 3-phase and 208-Vac, 50/60-Hz, 3-phase) which are commonly referred to as 415-Hz and 50 or 60 Hz power. Both sources must be four wire and three phase.

415 Hertz Power Source

Procurement, installation, and maintenance of the 415 Hz power source is the customer's responsibility. This source can be a motor-generator or a solid-state converter. It must be capable of delivering 415 Hz (+ or -5%) at 208 volts (+10%, -5%). The maximum power requirement will be approximately 208 amperes per phase, 75 kilovoltamperes.

50/60 Hertz Power Source

The 60 Hz power source is a typical commercial power line. The maximum power requirement from this source is approximately 60 amperes per phase, 10.8 kilovoltamperes. The 50 Hz is applicable to European installations.

The power source voltage in any installations using MODs I through IVA PDUs is:

208 Vac, 60 Hz

The power source voltage in any installations using a MOD IVB PDU can be:

208 Vac, 60 Hz
220 Vac, 50 Hz

The power source voltage in any installations using a MOD V PDU can be:

208/230 Vac, 60 Hz
220/230/380/415 Vac, 50 Hz

Power Requirements

Table 3 gives the power requirements of the Amdahl 470 computing systems and the four MSU types. The items labeled with a system name give the requirements for every frame in that system except the MSU. The items with an MSU name give the requirements for that MSU type. For the total requirements of your system, add the figures for the appropriate type and size of MSU. For example, an Amdahl 470V/6-II computing system with a Mod III, three-megabyte MSU requires 93 amperes per phase from a 415-Hz power source.

Table 3. PDU Distribution Loading Characteristics

AMDAHL 470 Computing System	STORAGE	415 Hertz		50/60 Hertz	
	Megabytes	Amperes per Phase	Kilovolt-Amperes	Amperes per Phase	Kilovolt-Amperes
V5, V6	0	64	24	13	4.6
MSU MOD II (Main Storage Unit)	2	41	14	3	1.1
	3	66	23	5	1.9
	4	82	29	5	1.9
	5	107	38	8	3.0
	6	122	43	8	3.0
	7	147	53	11	4.1
	8	163	58	11	4.1
MSU MOD III (Main Storage Unit)	2	16	5	3	1.1
	3	29	10	5	1.9
	4	32	11	5	1.9
	5	45	15	8	3.0
	6	48	16	8	3.0
	7	61	21	11	4.1
	8	64	22	11	4.1
MSU MOD VI (Main Storage Unit, Both VIA and VIB)	4	12	4	2	0.6
	6	21	7	4	1.2
	8	23	8	4	1.2
	12	35	12	6	1.8
	16	46	16	8	2.4
V7, V8	0	107	34	17	6.4
MSU MOD VIIA (Main Storage Unit)	4	12	4	2	0.6
	6	21	7	4	1.2
	8	23	8	4	1.2
	12	35	12	6	1.8
	16	46	16	8	2.4
MSU MOD VIIB (Main Storage Unit)	4	9	3	2	0.6
	8	12	4	2	0.6
	12	21	7	4	1.2
	16	23	8	4	1.2

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Motor-Generator Wiring

The customer's electrician must provide wiring into the motor-generator (MG) and between the MG and the PDU. Figure 4 illustrates the MG-to-PDU interconnections. The circled numbers correspond to entries in the following wiring descriptions. The American Wire Gauge (AWG) values are for copper wire. The following connections from the MG to the PDU are required:

1. Three-phase power circuit with a ground wire. The size of the lines will be determined by the load and distance of the run. Nonferrous metallic conduit, if allowed by local electrical code, is recommended for all runs over 60 feet. Plastic conduit is not recommended.
2. Control leads from the MG to the PDU. These leads consist of:
   a. Remote sense leads. Use three AWG #14 (2.0 mm) leads for runs up to 275 feet (84 meters). Use three AWG #10 (2.5 mm) leads for runs which exceed 275 feet (84 meters).
   b. Local/remote indicator leads. Two AWG #16 (1.5 mm) leads operate the local sensing indicator light. This light indicates whether the voltage is being sensed at the MG or at the PDU. ON indicates local sensing at the MG. OFF indicates remote sensing at the PDU. Remote sensing at the PDU is considered normal.
   c. Fifty-volt monitoring leads. Use one AWG #16 (1.5 mm) twisted pair in a shielded, jacketed cable. The shield must be grounded at the motor generator only. These leads detect and signal under-voltage from the MG.

The following connection to the MG is optional:

3. Two AWG #14 (2.0 mm) leads from the emergency power off (EPO) switch in the computer room to the MG. These leads remotely cut off the output of the generator. They are for customer use only.

At least 12 inches (30 cm) spacing should be maintained between the MG output feeders and the control lines. If this is not possible, the control wiring must be run in its own ferrous conduit.

Solid-State Converter Wiring

A solid-state converter should be wired according to the manufacturer's specifications. A solid-state converter is an alternative to a motor-generator.

Power Distribution Unit Wiring

The PDU requires two power sources, 415 Hz and 50/60 Hz. Both are brought in via conduit and hardwired into the PDU. Each conduit terminates in the appropriate PDU safety box. Refer to "Power Requirements," "System Grounding," and figures 5 through 7. The customer supplies the wiring between the PDU and the MG or solid-state converter.

System Grounding

An insulated, true earth grounding conductor must be installed as part of the branch circuit that supplies the unit or system. Local code may require that this conductor be identical in both size and insulation to the grounded and ungrounded branch circuit supply conductors. The conductor must be color coded green or green with yellow stripes. This conductor must not be a part of any other system ground and it must be grounded at all service equipment.

Electrical equipment that is to be plugged into the system's 115 Vac, 50/60 Hz, single phase convenience outlet must be of the grounded type. The ground conductor serving the convenience outlets must be connected to the common ground of the system.

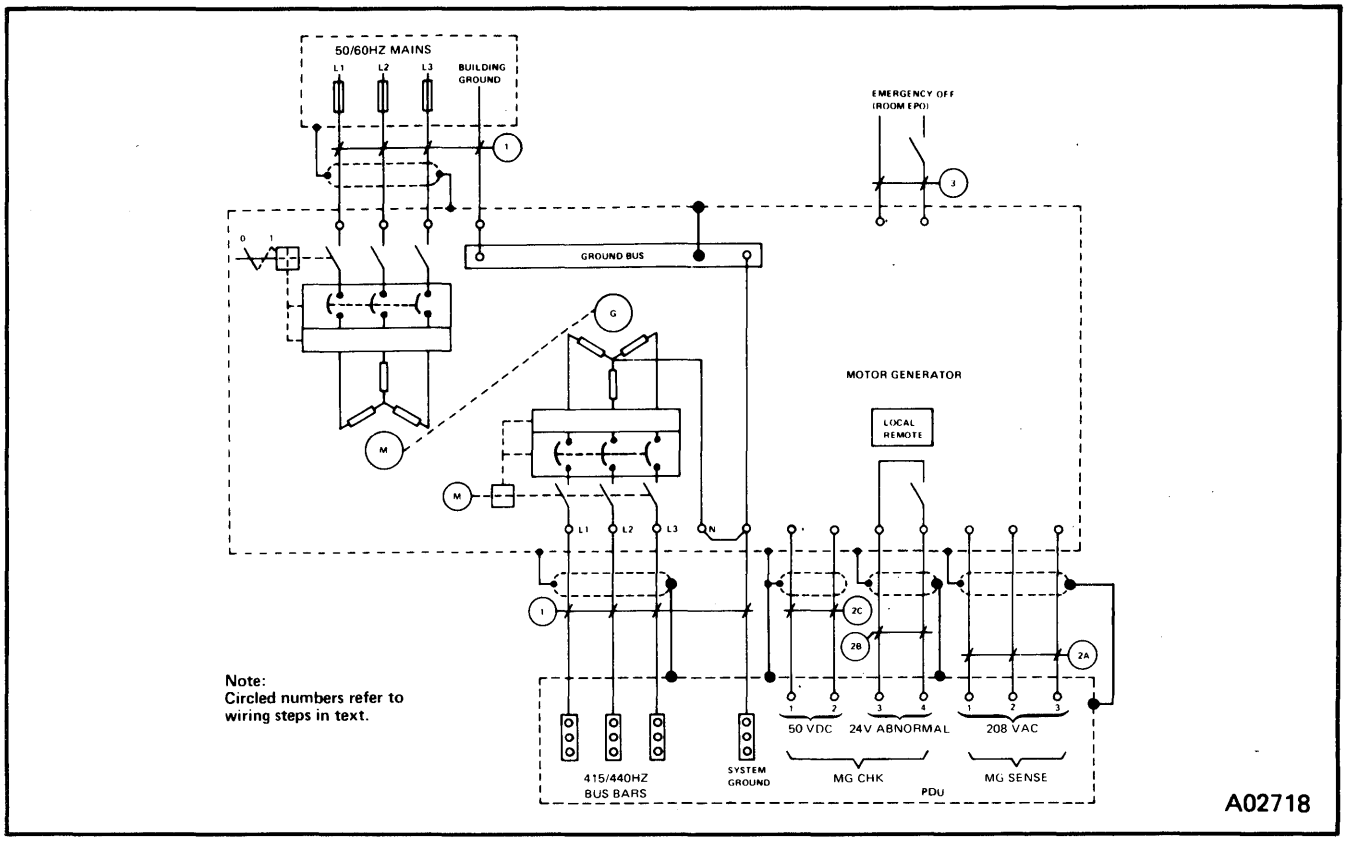

Figure 4. MG — to — PDU Power Wiring Diagram

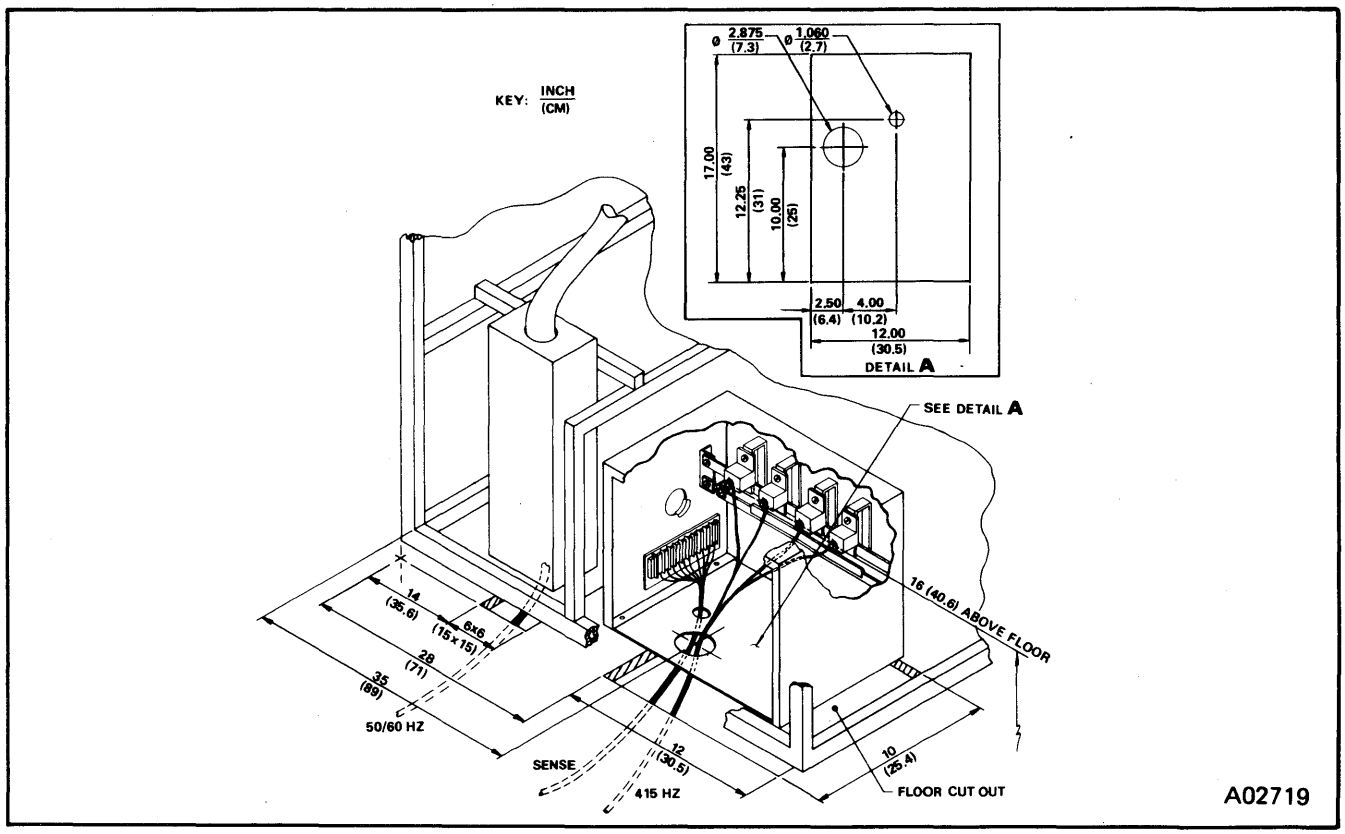

Figure 5. PDU Mod I, Interconnection Wiring Block

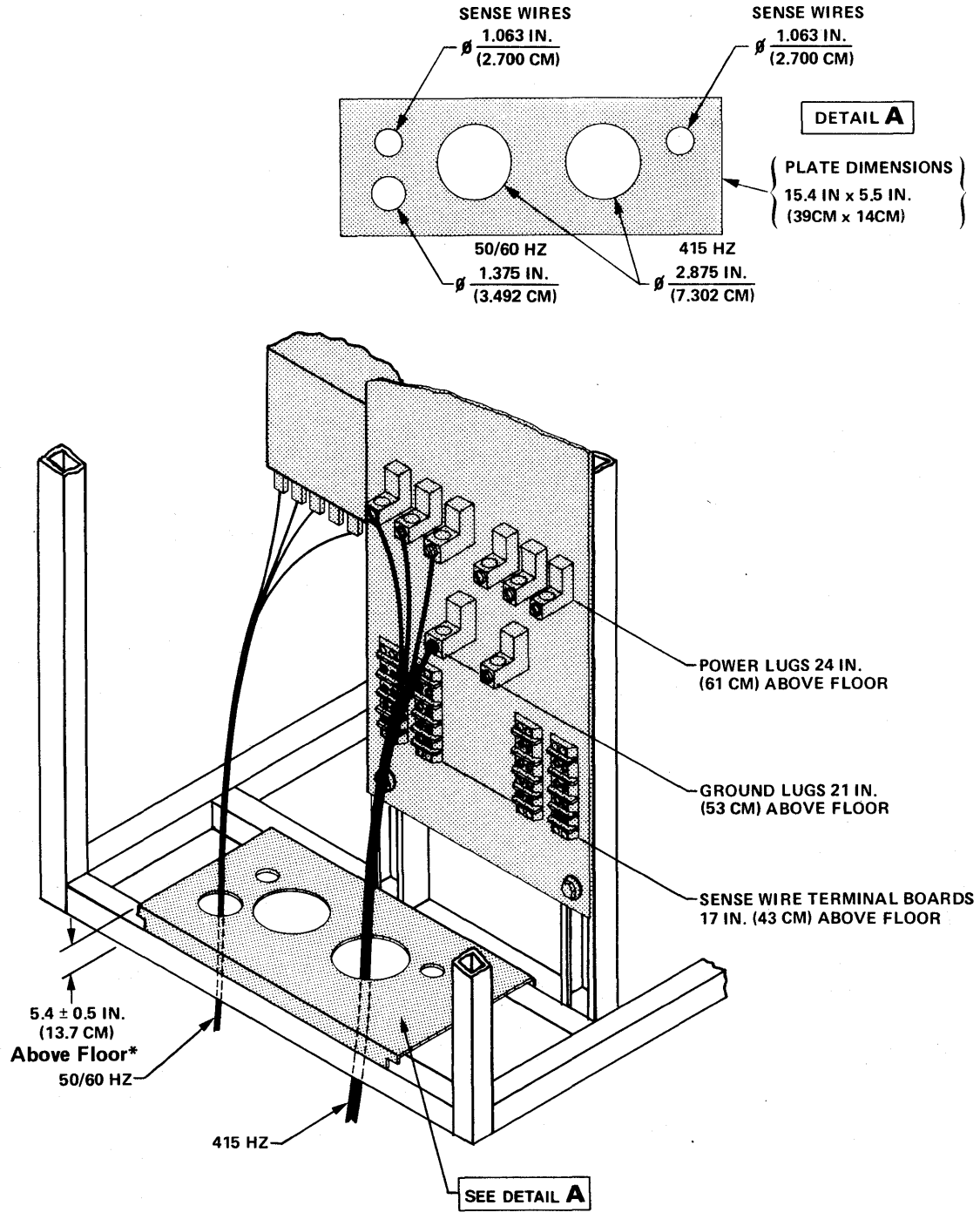

Figure 6. PDU MODs II, III and IV, Interconnection Wiring Block

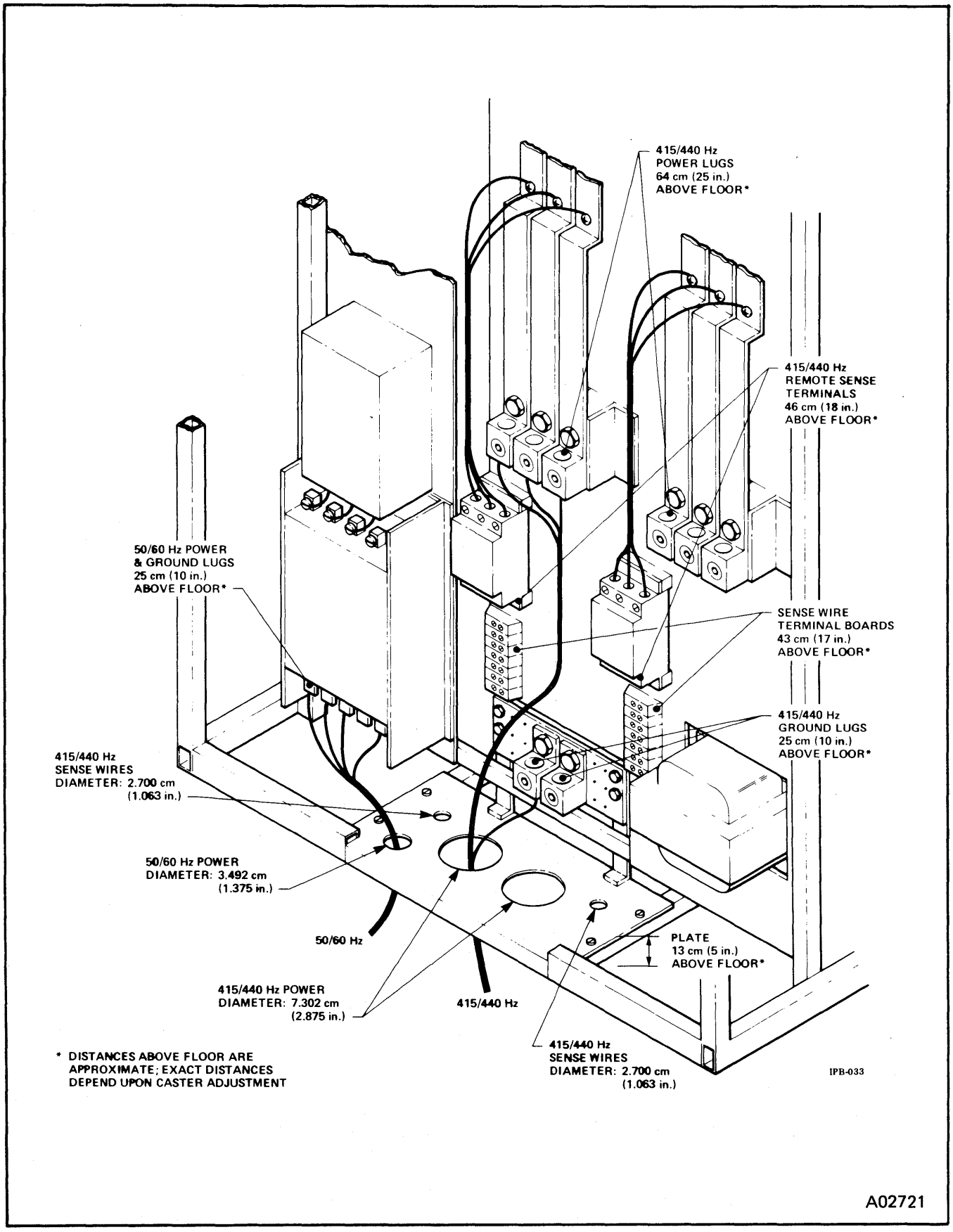

Figure 7. PDU MOD V, Interconnection Wiring Block

V/5 AND V/6 UNITS, FRAME DIMENSIONS AND WEIGHTS

Table 4 lists the frame dimensions without covers. Table 5 lists the frame dimensions with covers and the installed weights. Refer to figures 8 through 27 to identify which frame will be on your system.

Table 4. V/5 and V/6 Frame Dimensions (Without Covers)

FRAME	DEPTH		HEIGHT		WIDTH	
	In.	Cm.	In.	Cm.	In.	Cm.
Central Processing Unit	70	178	64	163	26	66
External Unit Processor	24	61	64	163	26	66
Cable Duct (2 or 3 MSU Frames)	30	76	*	*	30	76
Cable Duct (4 MSU Frames)	90	229	*	*	30	76
Main Storage Unit (Mod II or Mod III)	72	183	64	163	26	66
Main Storage Unit (Mod VI)	48	122	64	163	26	66
Console Equipment Frame	63	160	29	74	34	86
Console Pedestal	64	163	29	74	24	61
Console CRT	26	66	24	61	26	66
Power Distribution Unit (MOD II, III, IV)	48	122	64	163	26	66
(PDU MOD I Only)	88	224	64	163	26	66
Channel Unit	26	66	64	163	26	66
Channel and Cable Entry	48	122	64	163	26	66

*A cable duct is shipped as a disassembled unit. Height does not apply until unit is installed.

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Table 5. V/5 and V/6 Frame Dimensions and Weights (With Covers)

FRAME	DEPTH		HEIGHT		WIDTH		WEIGHT	
	In.	Cm.	In.	Cm.	In.	Cm.	Lbs.	Kg.
Central Processing Unit	70	178	64.5	164	30	76	1,607	729
External Unit Processor	24	61	64.5	164	30	76	436	198
Cable Duct (2 or 3 MSU Frames)	30	76	64.5	164	30	76	100	45
Cable Duct (4 MSU Frames)	90	229	64.5	164	30	76	100	45
Main Storage Unit (Mod II or Mod III)	74	188	64.5	164	30	76	848	385
Main Storage Unit (Mod VI)	50	127	64.5	164	30	76	1,000	454
Console Equipment Frame	63	160	29	74	34	86	785	356
Console Pedestal	64	163	29	74	24	61	40	18
Console CRT	26	66	24	61	26	66	70	32
Power Distribution Unit (MOD II, III, IV)	52	132	64.5	164	30	76	900	409
(PDU MOD I Only)	92	234	64.5	164	30	76	1125	510
Channel Unit	26	66	64.5	164	30	76	613	278
Channel and Cable Entry	50	127	64.5	164	30	76	965	438

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V/7 AND V/8 UNITS, FRAME DIMENSIONS AND WEIGHTS

Table 6 lists the frame dimensions without covers. Table 7 lists the frame dimensions with covers and the installed weights. Refer to figures 28 through 43 to identify which frames will be on your system.

Table 6. V/7 and V/8 Frame Dimensions (Without Covers)

FRAME	DEPTH		HEIGHT		WIDTH	
	In.	Cm.	In.	Cm.	In.	Cm.
Central Processing Unit	72	183	64	163	26	66
Storage Control Unit	24	61	64	163	26	66
Cable Duct (2 MSU Frames)	30	76	*	*	30	76
Main Storage Unit (Mod VII)	48	122	64	163	26	66
Console Equipment Frame	63	160	29	74	34	86
Console Pedestal	64	163	29	74	24	61
Console CRT	26	66	24	61	26	66
Power Distribution Unit	48	122	64	163	26	66
(PDU Mod V only)	51	130	64	163	36	92
Channel Unit	24	61	64	163	26	66
Channel and Cable Entry	48	122	64	163	26	66
Hardware Measurement Interface (Optional)	26	66	64	163	24	61

*A cable duct is shipped as a disassembled unit. Height does not apply until unit is installed.

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Table 7. V/7 and V/8 Frame Dimensions and Weight (With Covers)

FRAME	DEPTH		HEIGHT		WIDTH		WEIGHT	
	In.	Cm.	In.	Cm.	In.	Cm.	Lbs.	Kg.
Central Processing Unit	72	183	64.5	164	30	76	1,700	771
Storage Control Unit	24	61	64.5	164	30	76	650	295
Cable Duct	30	76	64.5	164	30	76	100	45
Main Storage Unit (Mod VII)	50	127	64.5	164	30	76	1,000	454
Console Equipment Frame	63	160	29	74	34	86	785	356
Console Pedestal	64	163	29	74	24	61	40	18
Console CRT	26	66	24	61	26	66	70	32
Power Distribution Unit (MOD II, III, IV)	52	132	64.5	164	30	76	900	409
(PDU V ONLY)	51.5	132	64.5	164	36.5	93	1400	636
Channel Unit	24	61	64.5	164	30	76	650	295
Channel and Cable Entry	50	127	64.5	164	30	76	965	438
Hardware Measurement Interface (Optional)	30	76	64.5	164	28	71	255	100

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SYSTEM CABLE REQUIREMENTS

The interframe power and power-control cables required to connect the PDU to the CPU, MSU, and console are supplied with the system. A standard power cable length of 50 feet determines the distance the PDU can be removed from the system. The console must be placed within 100 feet of the CPU and PDU. To facilitate maintenance, the console should also be within 35 feet of the system and in the same room as the system.

If a channel-to-channel adapter is ordered, Amdahl will supply cables from the adapter to the other channel.

The customer supplies input/output cables and EPO cables between control units and from the channel/cable entry frame to the first control unit.

SYSTEM CONFIGURATIONS

Figures 8 through 48 show scale drawings of the various Amdahl 470 computing system configurations, indicating service clearances, the position of cable entries, and the location of air intakes. Each scale layout figure has a corresponding raised-floor tile installation pattern diagram on the following page of the figure. Cutout diagrams showing dimensions are located at the end of this manual.

The illustrations can be cut out to serve as templates for use when laying out computer room plans.

RAISED-FLOOR TILE CUTOUTS

The illustrations following each system configuration show the proper placement of the raised floor tile installation pattern for the various Amdahl 470 computing system configurations. Tile cutouts for the console are not included because their location depends upon the position of the console. The cutouts for the console should be minimized to reduce air loss.

All measurements for cutouts apply to 24-inch-by-24-inch floor tiles. Customers with floor tiles of a different dimension should contact their Amdahl installation planning representative for instructions.

The raised floor of the computer room must be capable of supporting 65 pounds per square foot. If a PDU MOD V unit is being installed the floor must be capable of supporting 100 pounds per square foot. Amdahl recommends that the floor of a new room be built to support 100 pounds per square foot (220 kg per square meter).

It is recommended that the floor has channel-iron stringers to ensure that the floor has additional support after the floor tile has been cut. Other types of flooring may require additional support. Additional floor support may be required for the CPU and PDU MOD V. Contact your Amdahl installation planning representative for further details.

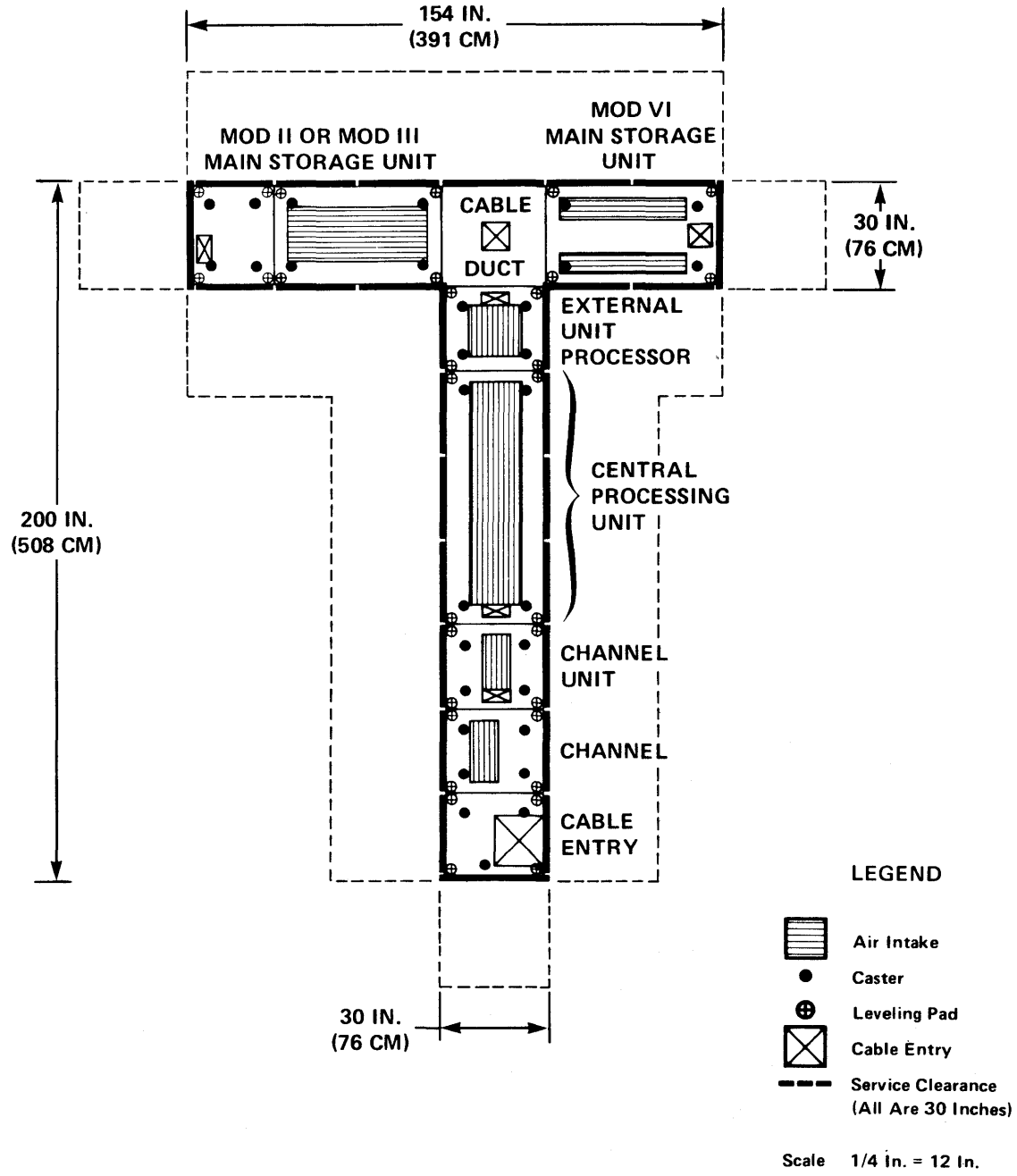
FIELD ENGINEER ROOM REQUIREMENTS

To support the Amdahl maintenance effort, the customer must provide for the field engineer an onsite work area of approximately 200 square feet. Amdahl will provide the necessary furniture. The systems engineer will also need a work area. This is normally a desk in the customer's programming area.

A telephone line terminated at the console with a standard modular jack is required. This telephone line will be used for the remote diagnostic facility, Amdahl Diagnostic Assistance Center (AMDAC).

SYSTEM INPUT/OUTPUT EQUIPMENT

Refer to the Amdahl 4705 Communications Processor Physical Planning Manual (Publication G1022.0). This publication provides the necessary specification information for the Amdahl 4705 Communication Processor.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 1. Raised-floor tile cutouts for this configuration are shown in Figure 9. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

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Figure 8. V/5 and V/6 Scale Layout Showing "Long-Left-T," Configuration 1

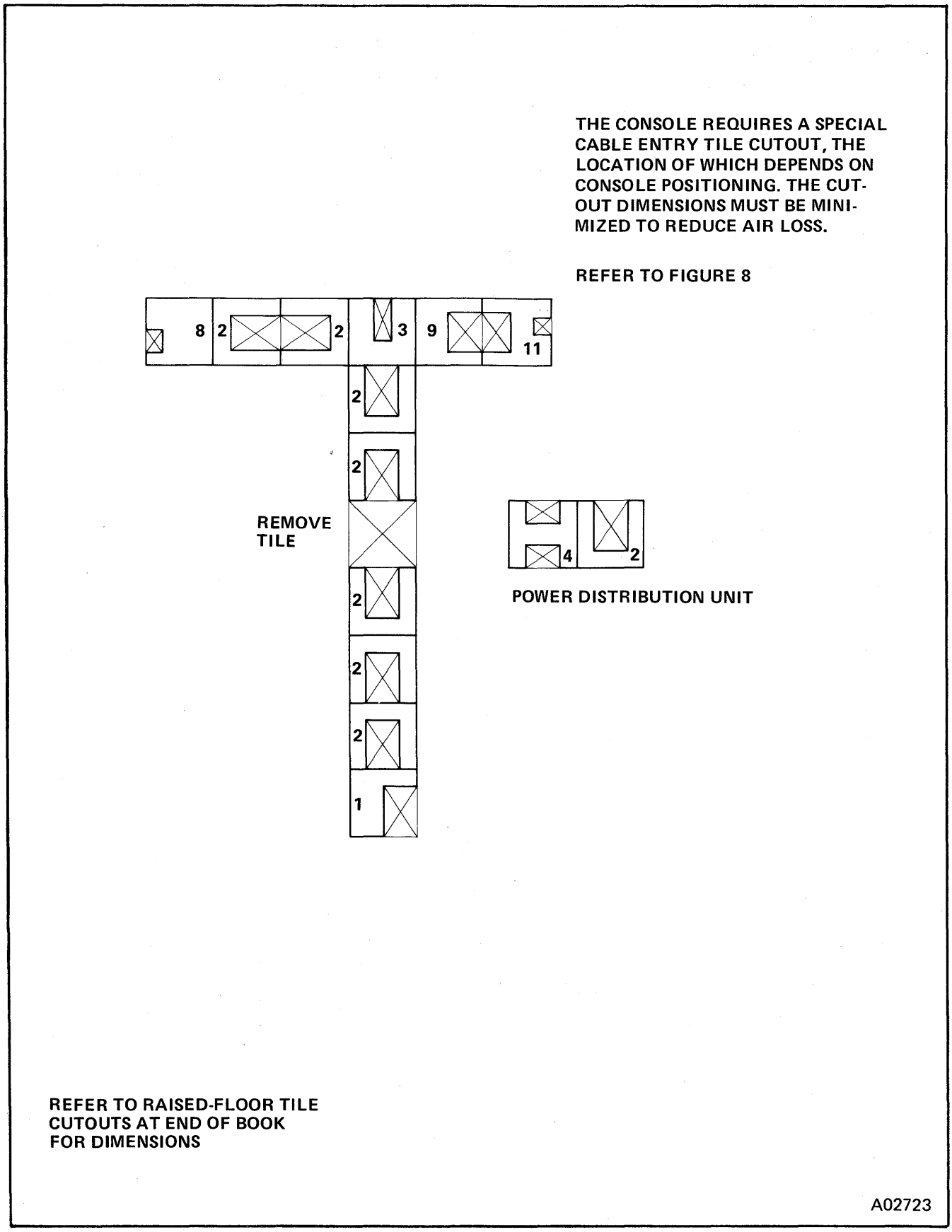
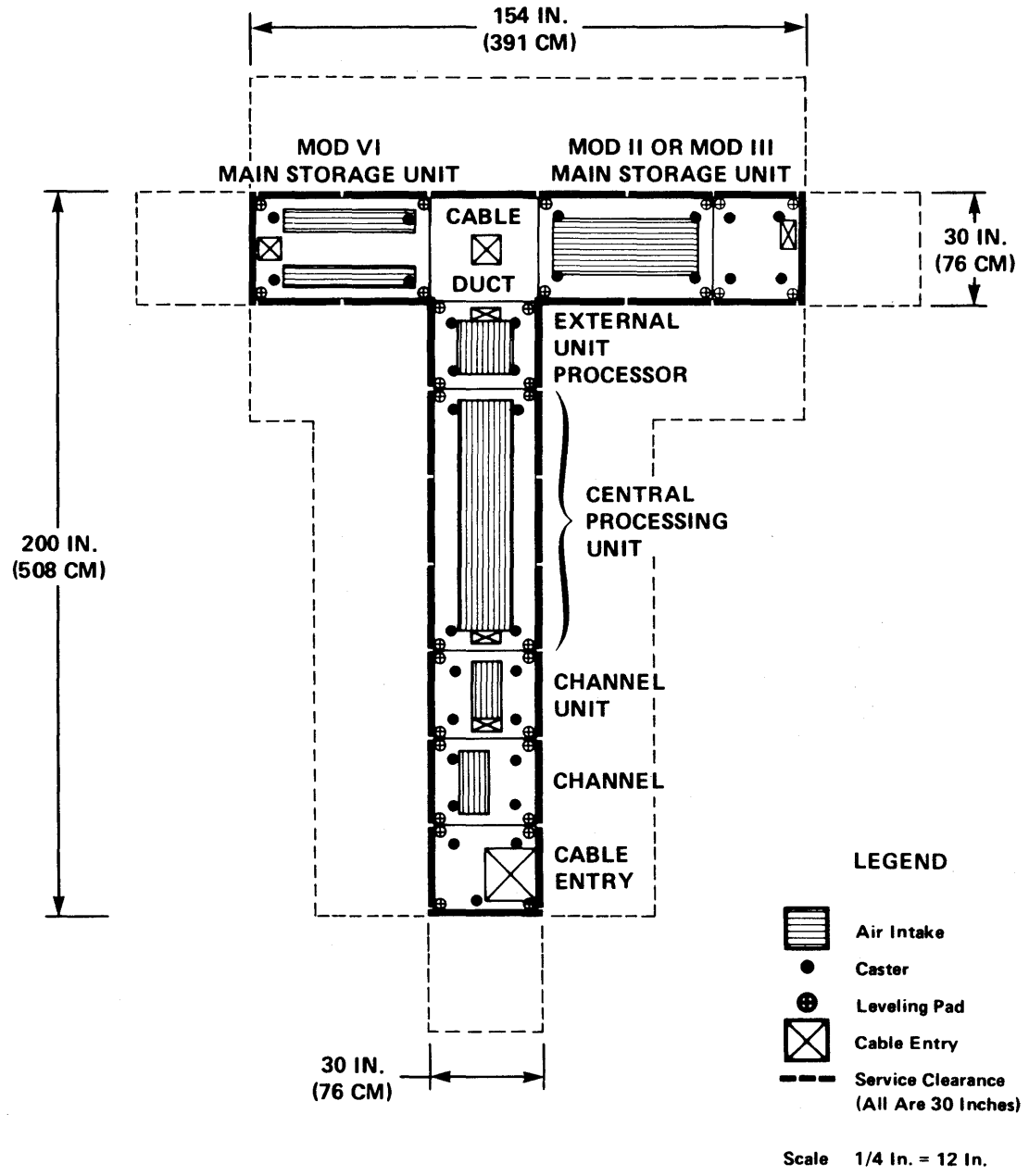


Figure 9. V/5 and V/6 Alternate Configuration 1. Raised-Floor Tile Installation Pattern.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 2. Raised-floor tile cutouts for this configuration are shown in Figure 11. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

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Figure 10. V/5 and V/6 Scale Layout Showing "Long-Right-T", Configuration 2

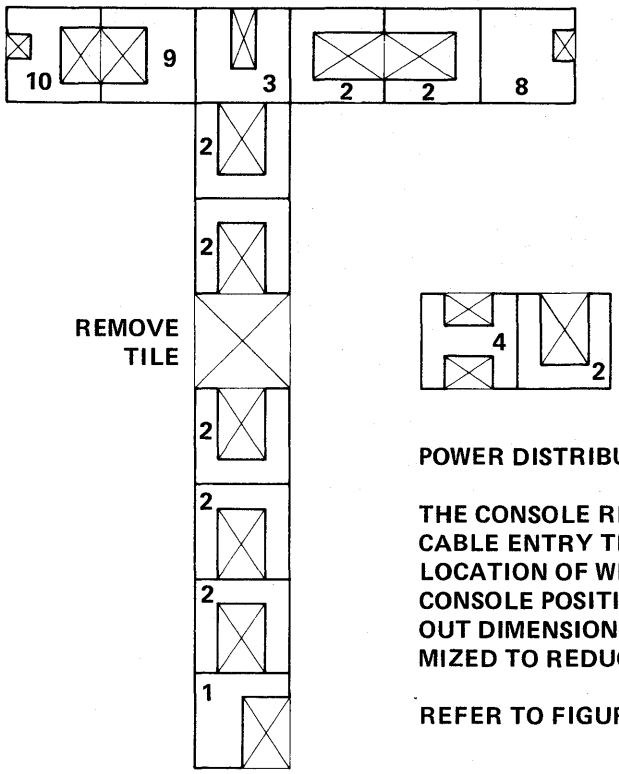
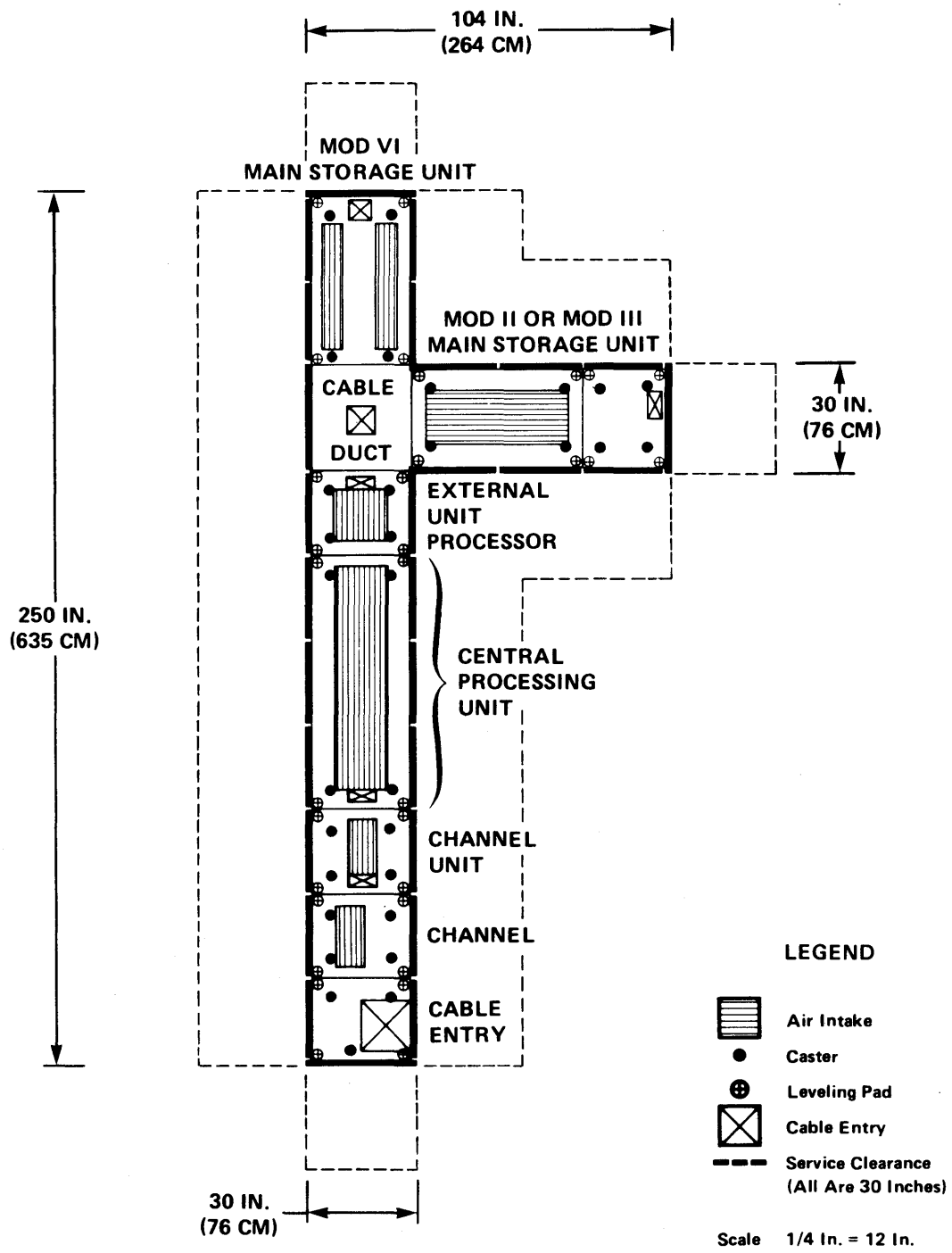


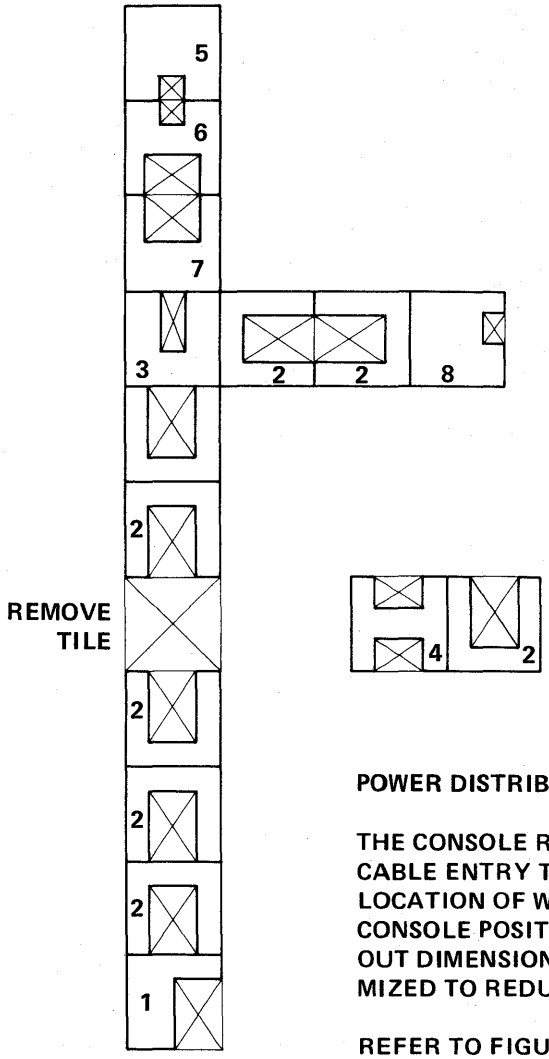
Figure 11. V/5 and V/6 Alternate Configuration 2, Raised-Floor Tile Installation Pattern.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 3. Raised-floor tile cutouts for this configuration are shown in Figure 13. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02726

Figure 12. V/5 and V/6 Scale Layout Showing "Long-Right-L", Configuration 3



POWER DISTRIBUTION UNIT

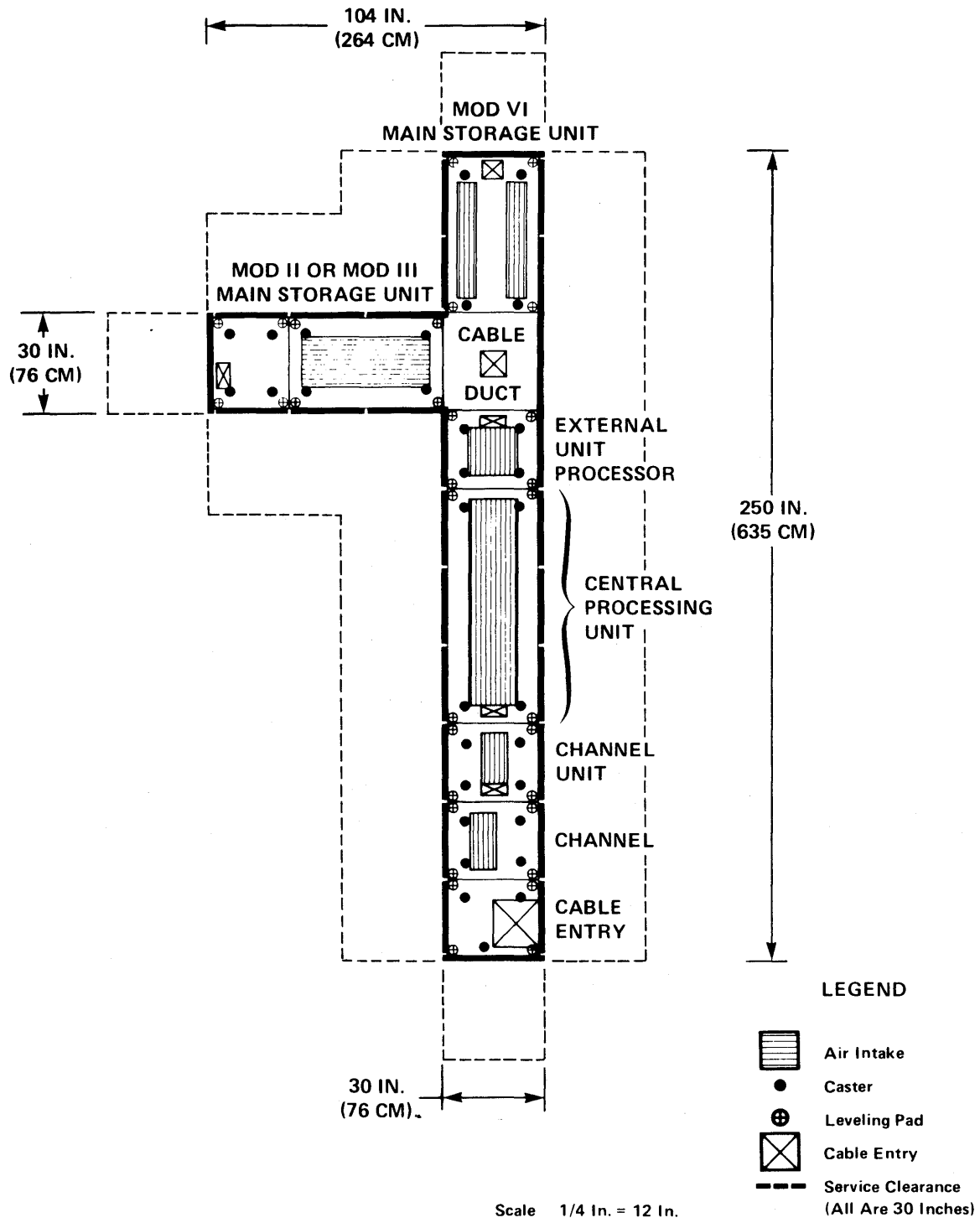
THE CONSOLE REQUIRES A SPECIAL CABLE ENTRY TILE CUTOUT, THE LOCATION OF WHICH DEPENDS ON CONSOLE POSITIONING. THE CUT-OUT DIMENSIONS MUST BE MINI-MIZED TO REDUCE AIR LOSS.

REFER TO FIGURE 12

REFER TO RAISED-FLOOR TILE CUTOUTS AT END OF BOOK FOR DIMENSIONS

A02727

Figure 13. V/5 and V/6 Alternate Configuration 3 Raised-Floor Tile Installation Pattern.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 4. Raised-floor tile cutouts for this configuration are shown in Figure 15. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02728

Figure 14. V/5 and V/6 Scale Layout Showing "Long-Left-L", Configuration 4

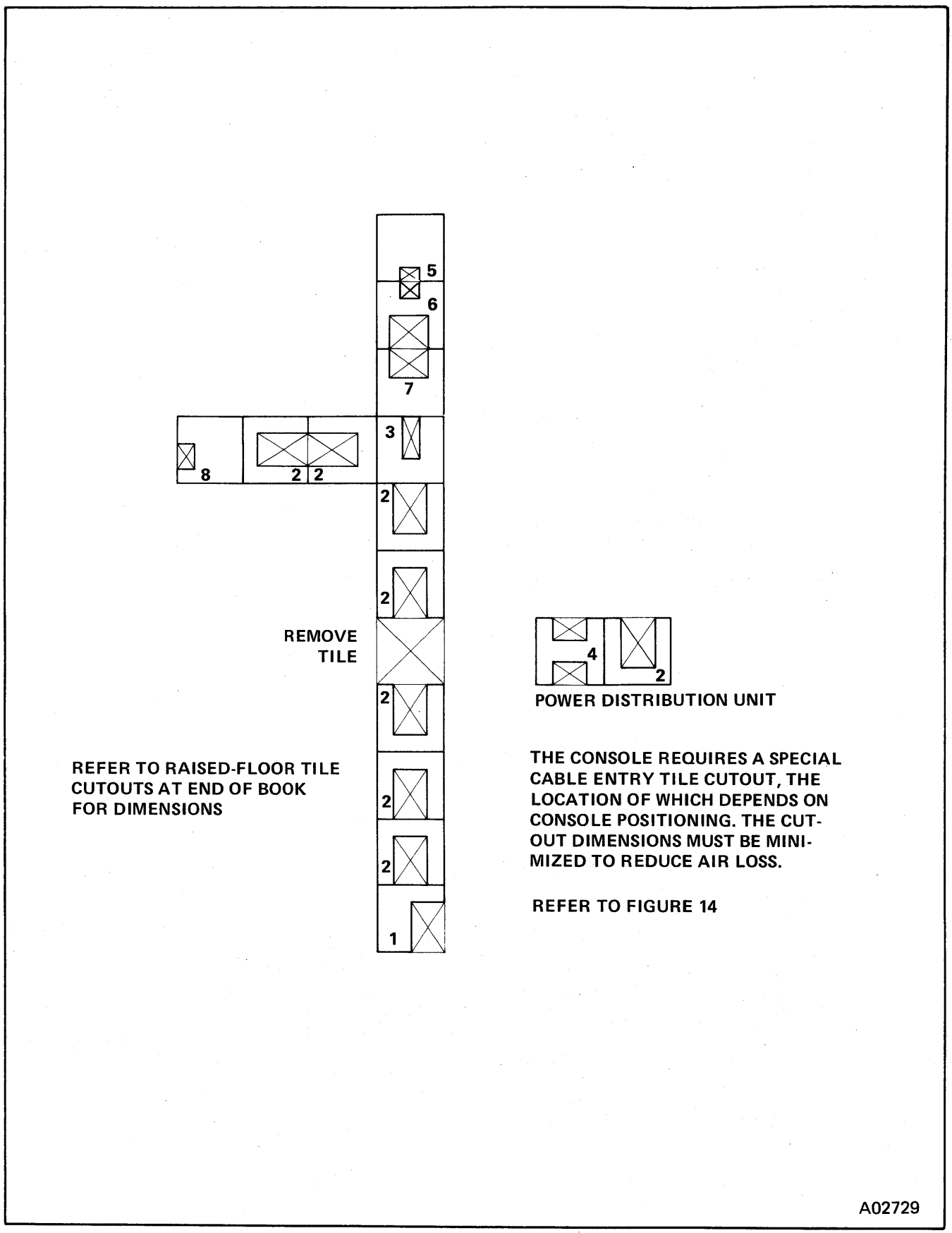
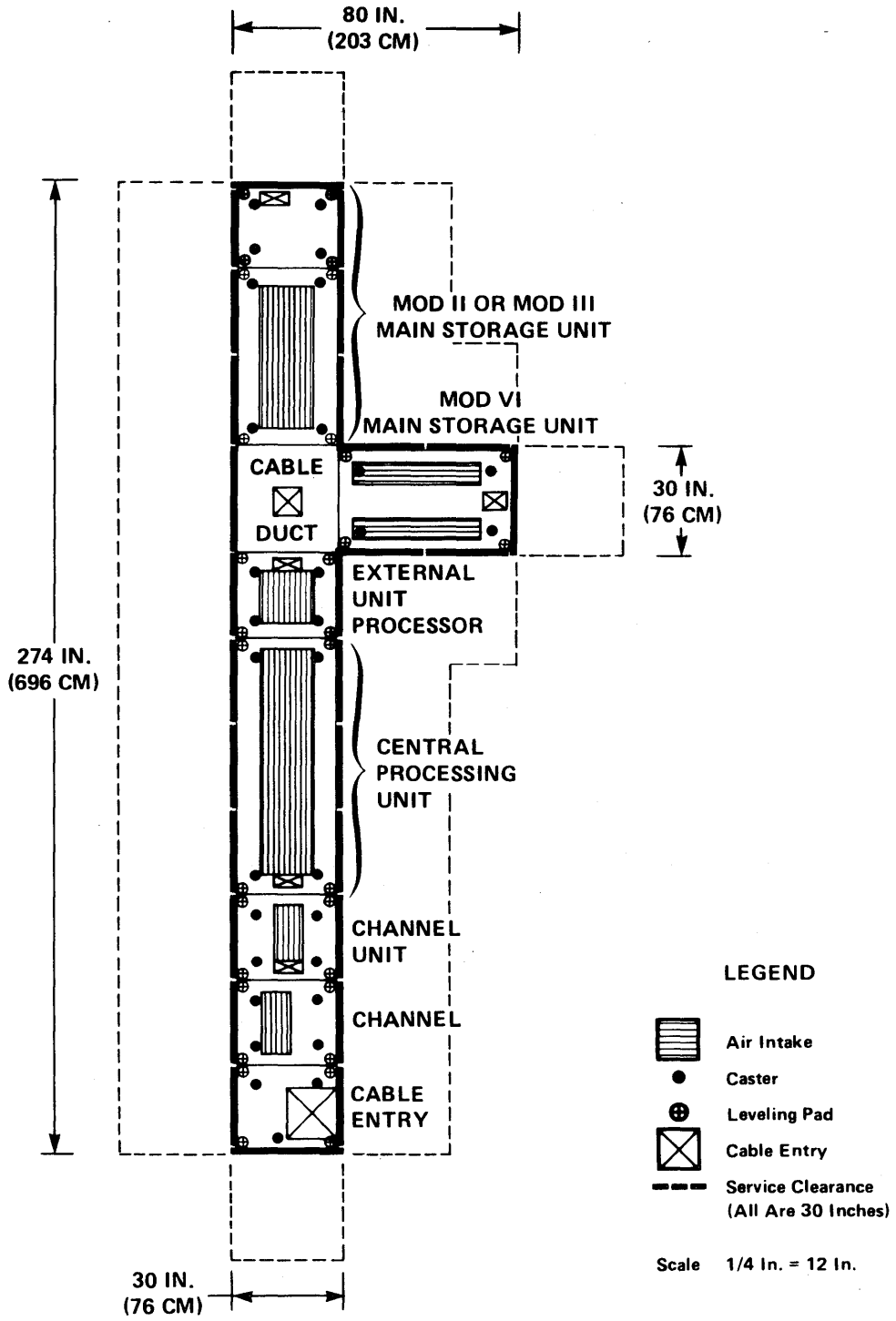


Figure 15. V/5 and V/6 Alternate Configuration 4 Raised-Floor Tile Installation Pattern.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 5. Raised-floor tile cutouts for this configuration are shown in Figure 17. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02730

Figure 16. V/5 and V/6 Scale Layout Showing "Short-Right-L", Configuration 5

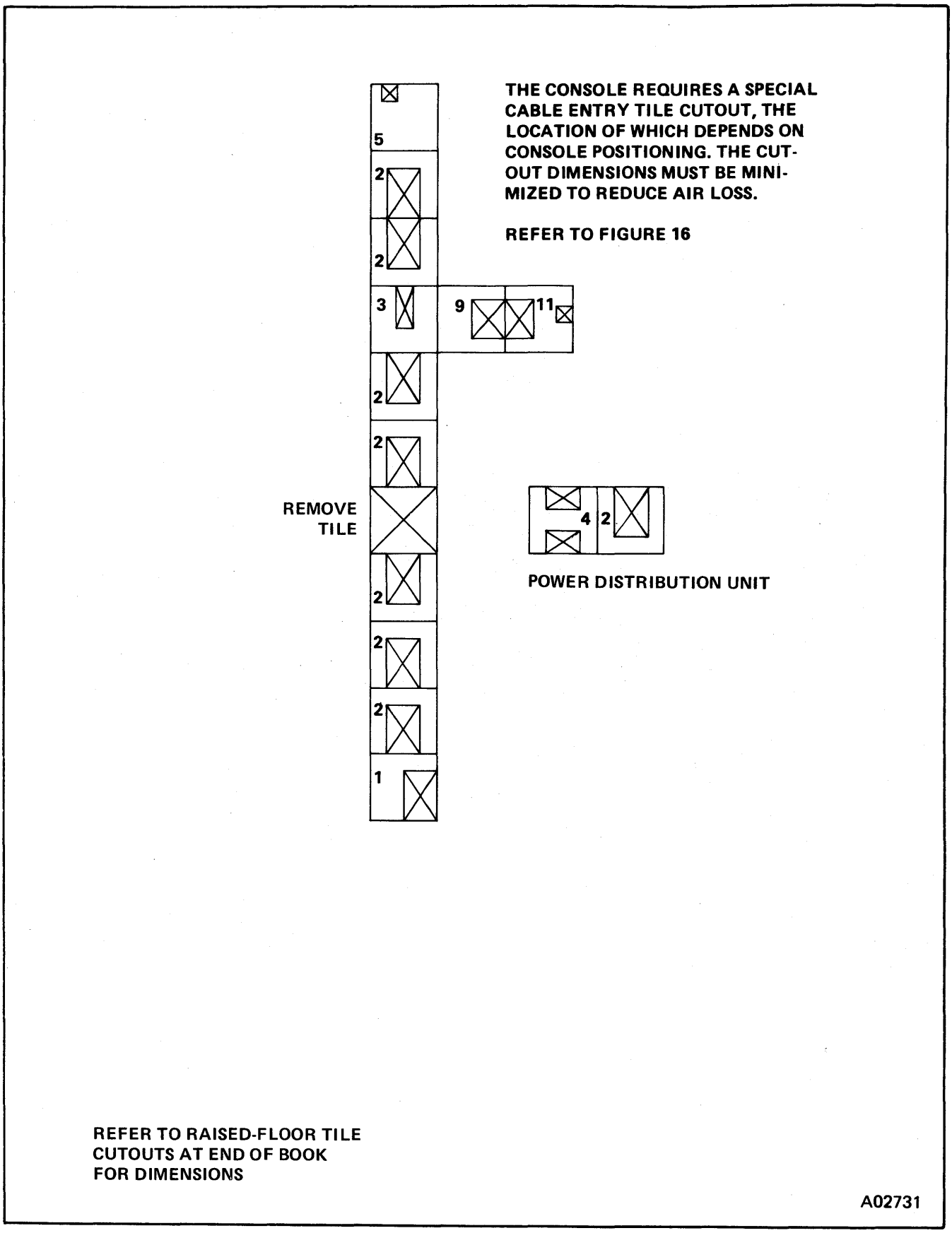
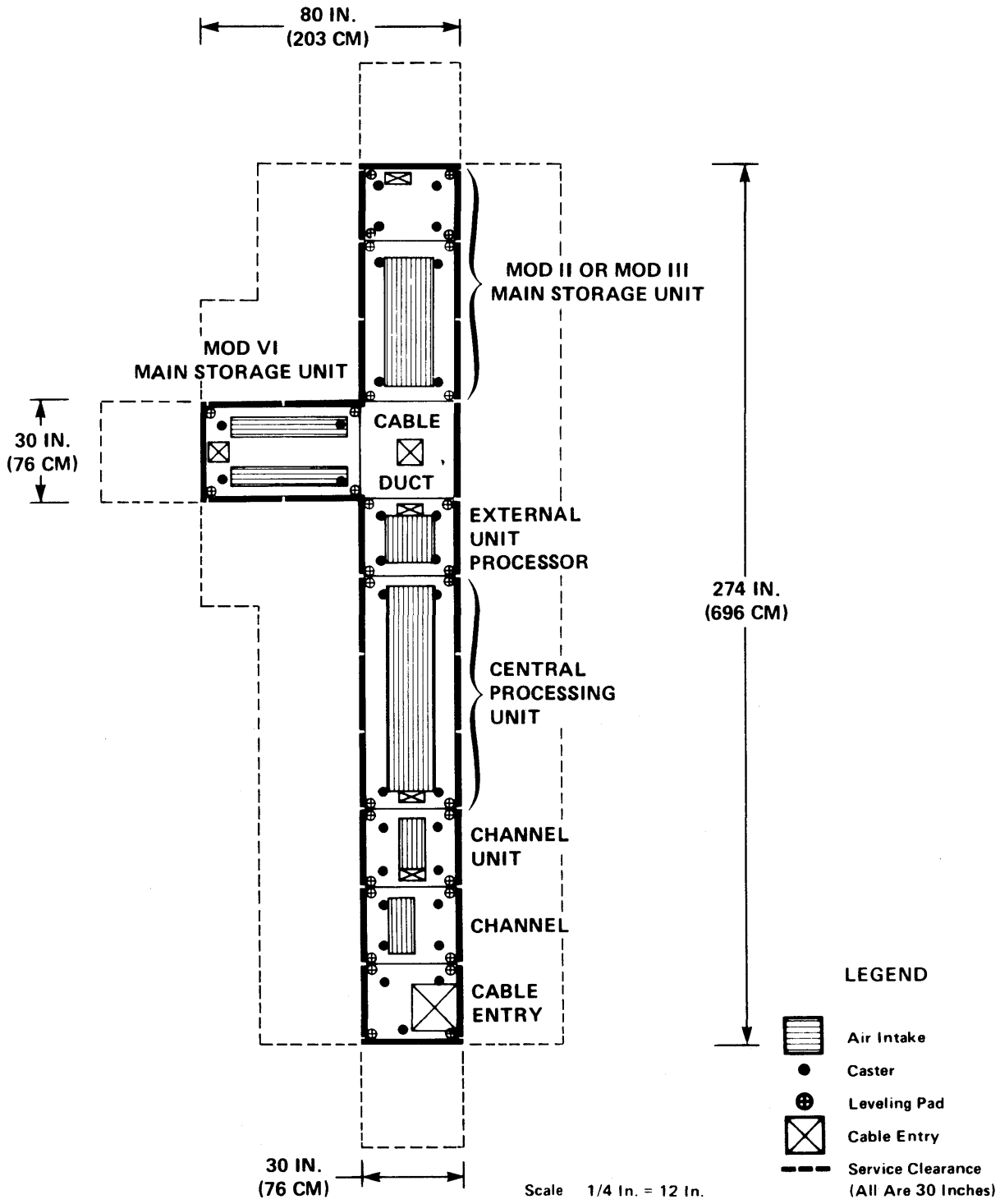


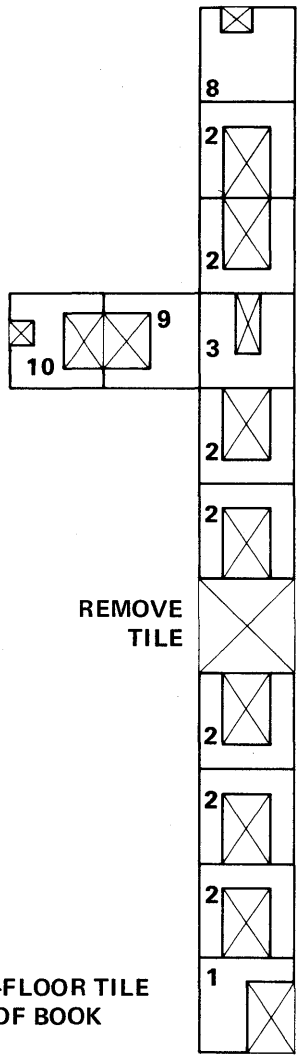
Figure 17. V/5 and V/6 Alternate Configuration 5 Raised-Floor Tile Installation Pattern.



Note: Two megabytes Mod II or Mod III MSU and two, four, or six megabytes Mod VI MSU configuration 6. Raised-floor tile cutouts for this configuration are shown in Figure 19. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

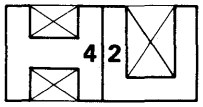
A02732

Figure 18. V/5 and V/6 Scale Layout Showing "Short-Left-L", Configuration 6



THE CONSOLE REQUIRES A SPECIAL CABLE ENTRY TILE CUTOUT, THE LOCATION OF WHICH DEPENDS ON CONSOLE POSITIONING. THE CUT-OUT DIMENSIONS MUST BE MINI-MIZED TO REDUCE AIR LOSS.

REFER TO FIGURE 18

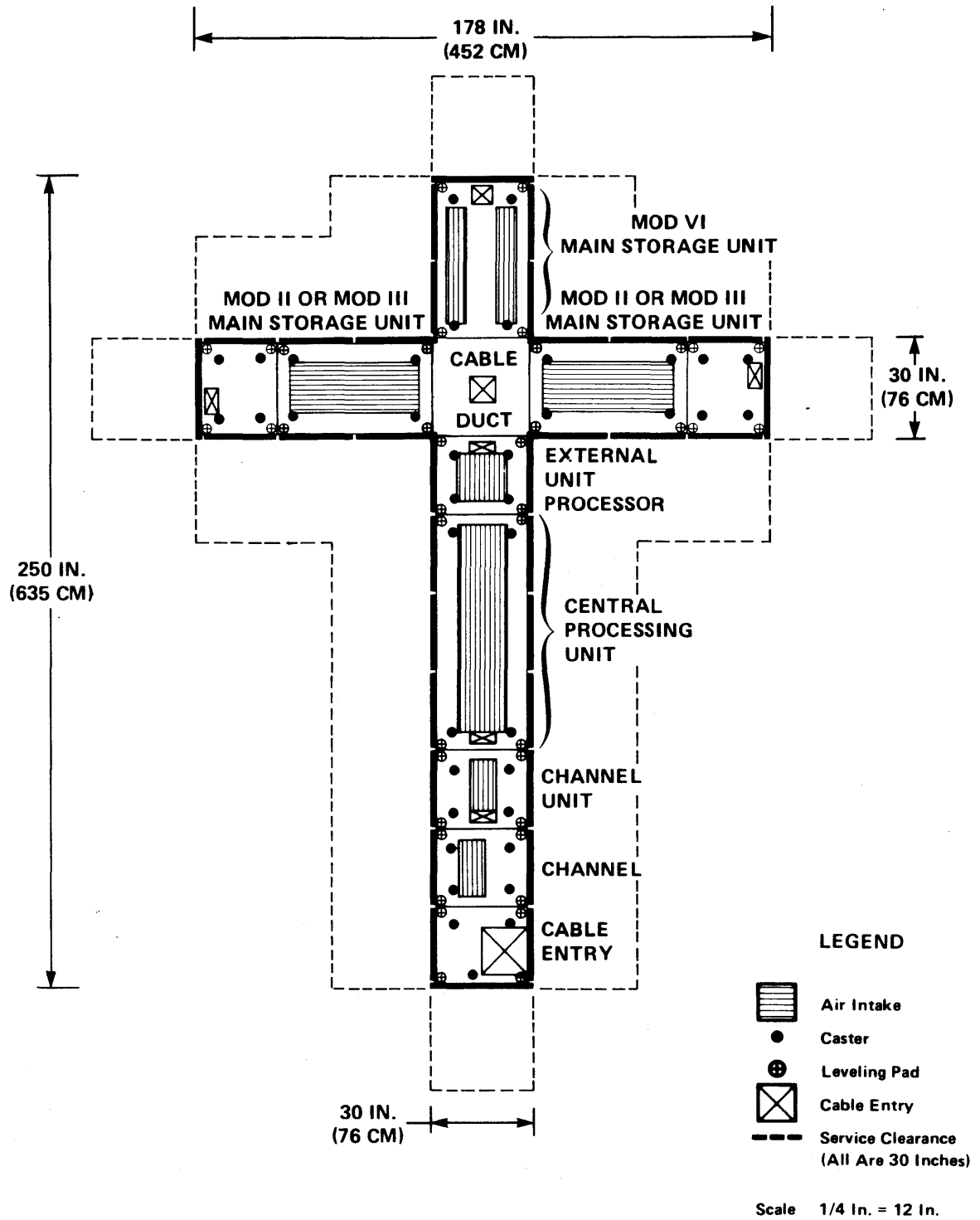


POWER DISTRIBUTION UNIT

REFER TO RAISED-FLOOR TILE CUTOUTS AT END OF BOOK FOR DIMENSIONS

A02733

Figure 19. V/5 and V/6 Alternate Configuration 6 Raised-Floor Tile Installation Pattern.



Note: Four megabytes Mod II or Mod III MSU and two, four, six or eight megabytes Mod VI MSU alternate configuration 1. Raised-floor tile cutouts for this configurations are shown in Figure 21. Scale layouts for the console and the power distribution unit appear in Figures 38 and 39.

A02734

Figure 20. V/5 and V/6 Scale Layout Showing "Balanced-L", Alternate Configuration 1

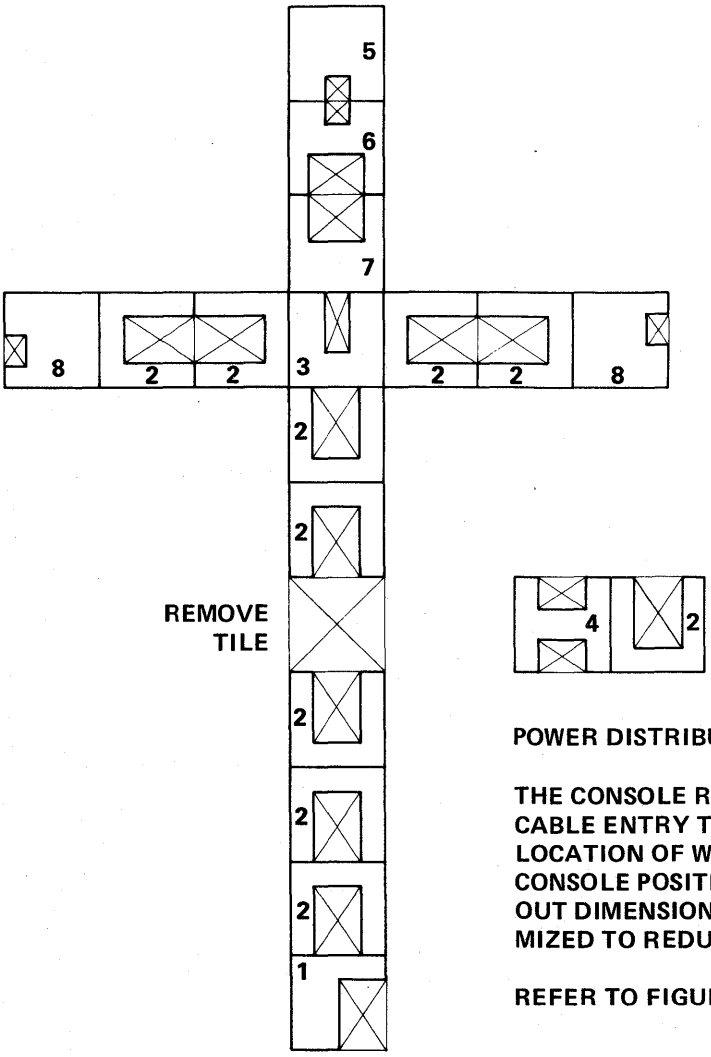
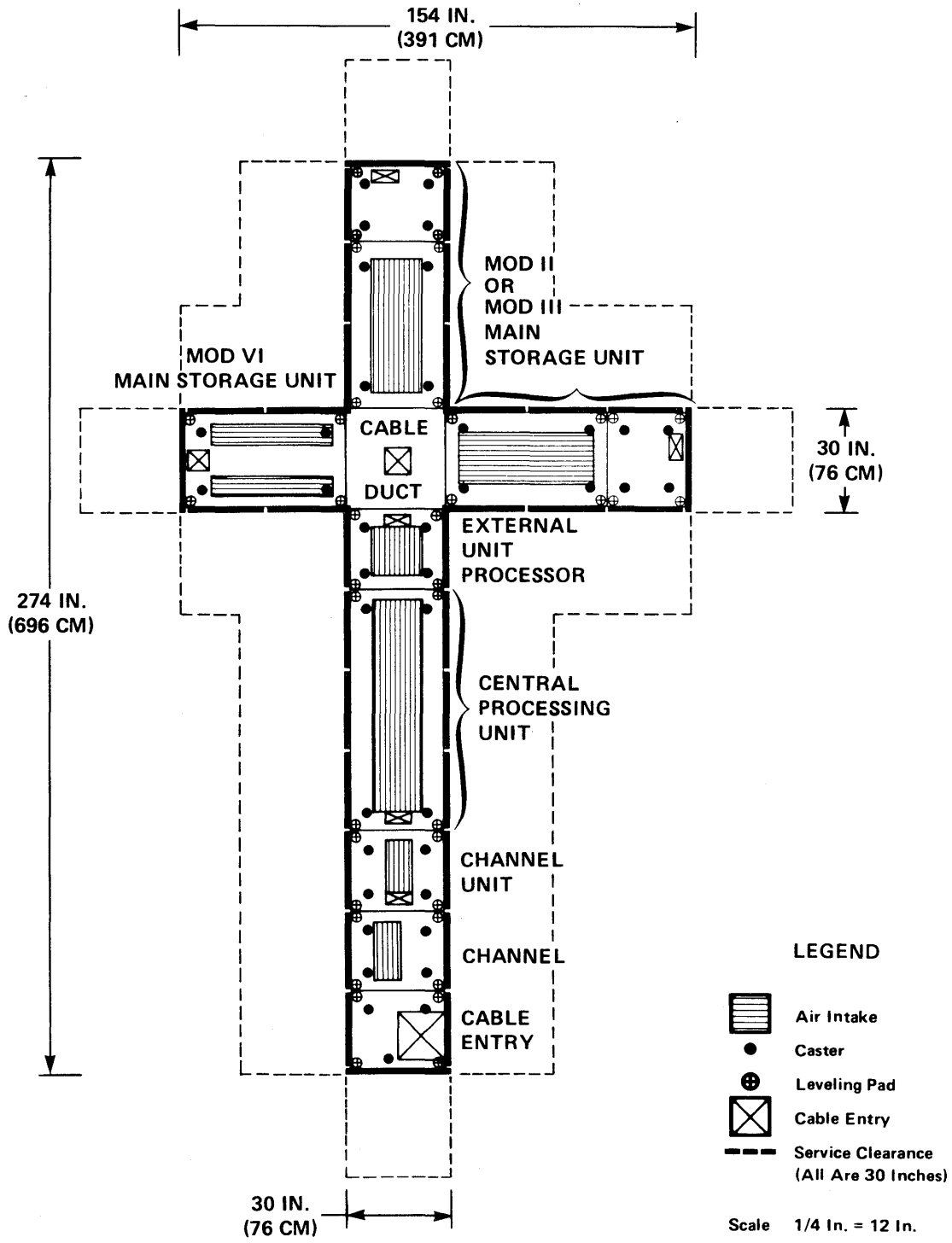


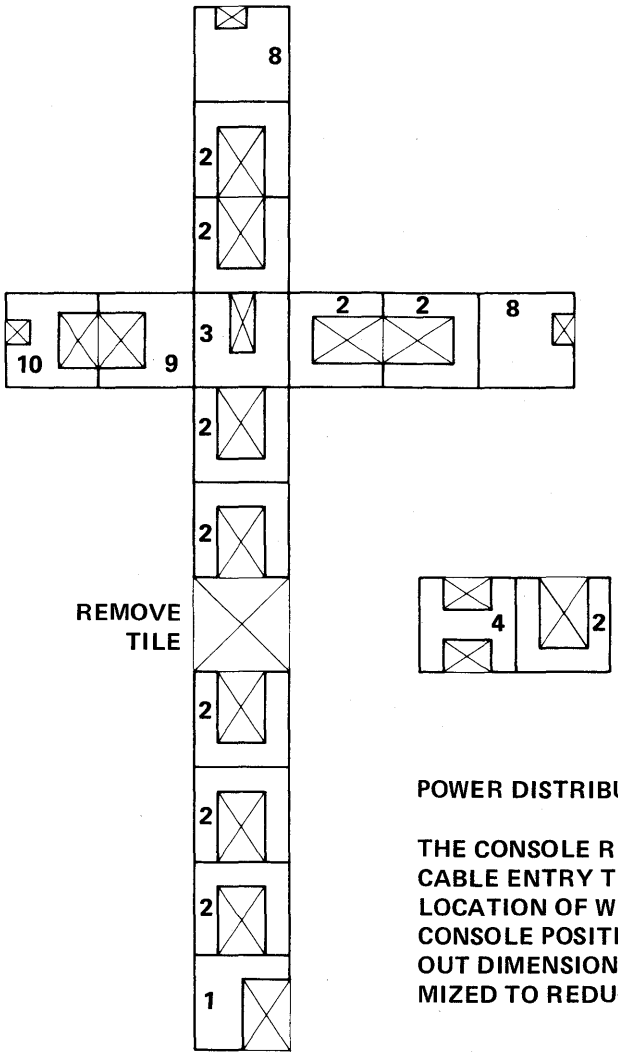
Figure 21. V/5 and V/6 Alternate Configuration 1, Raised-Floor Tile Installation Pattern.



Note: Four megabytes Mod II or Mod III MSU and two, four, six or eight megabytes Mod VI MSU alternate configuration 2. Raised-floor tile cutouts for this configurations are shown in Figure 23. Scale layouts for the console and the power distribution unit appear in Figures 38 and 39.

A02736

Figure 22. V/5 and V/6 Scale Layout Showing "Long-Right-L", Alternate Configuration 2



POWER DISTRIBUTION UNIT

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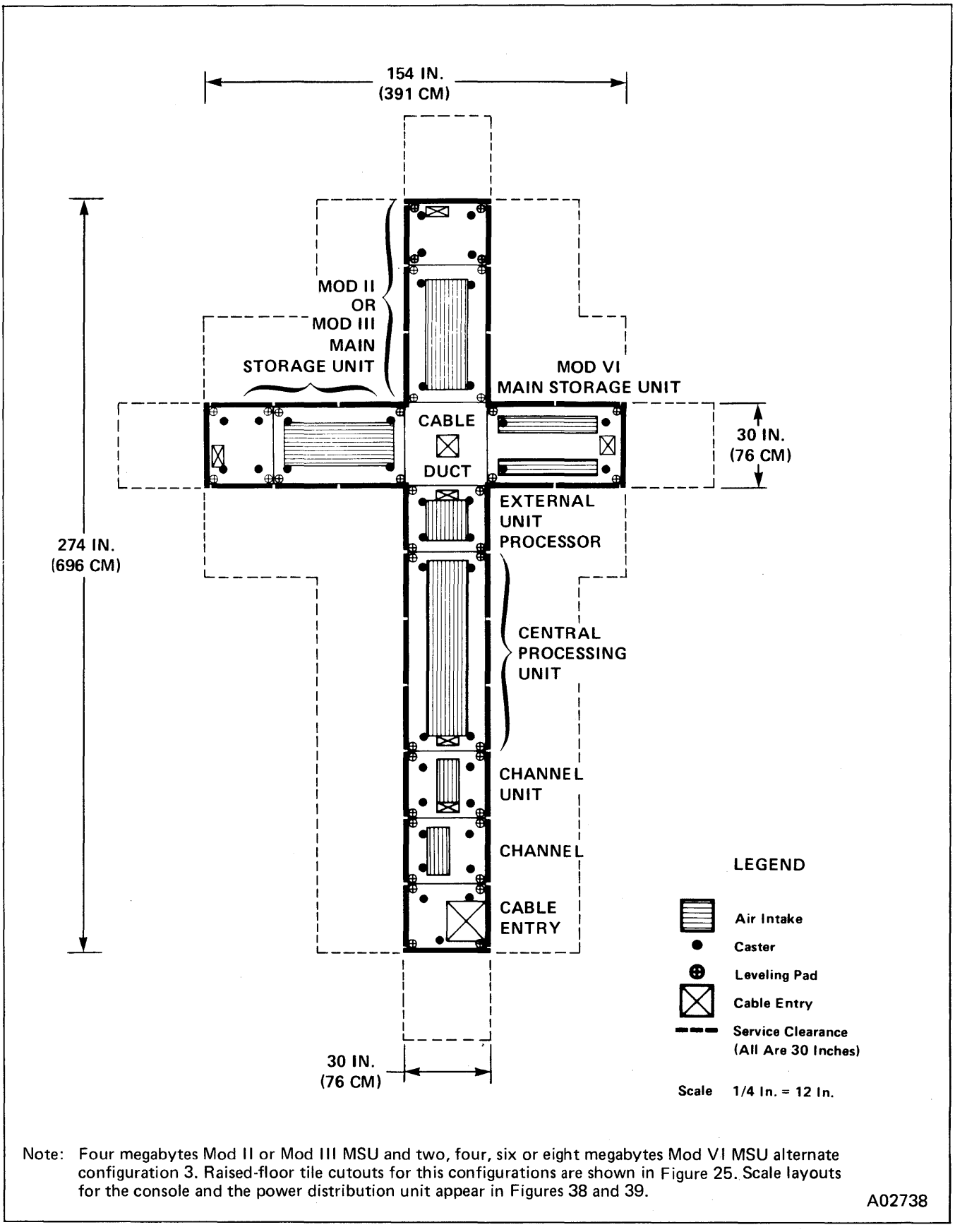
REFER TO FIGURE 22

REFER TO RAISED-FLOOR TILE CUTOUTS AT END OF BOOK FOR DIMENSIONS

A02737

Figure 23. V/5 and V/6 Alternate Configuration 2. Raised-Floor Tile Installation Pattern.



Note: Four megabytes Mod II or Mod III MSU and two, four, six or eight megabytes Mod VI MSU alternate configuration 3. Raised-floor tile cutouts for this configurations are shown in Figure 25. Scale layouts for the console and the power distribution unit appear in Figures 38 and 39.

A02738

Figure 24. V/5 and V/6 Scale Layout Showing "Long-Left-L", Alternate Configuration 3

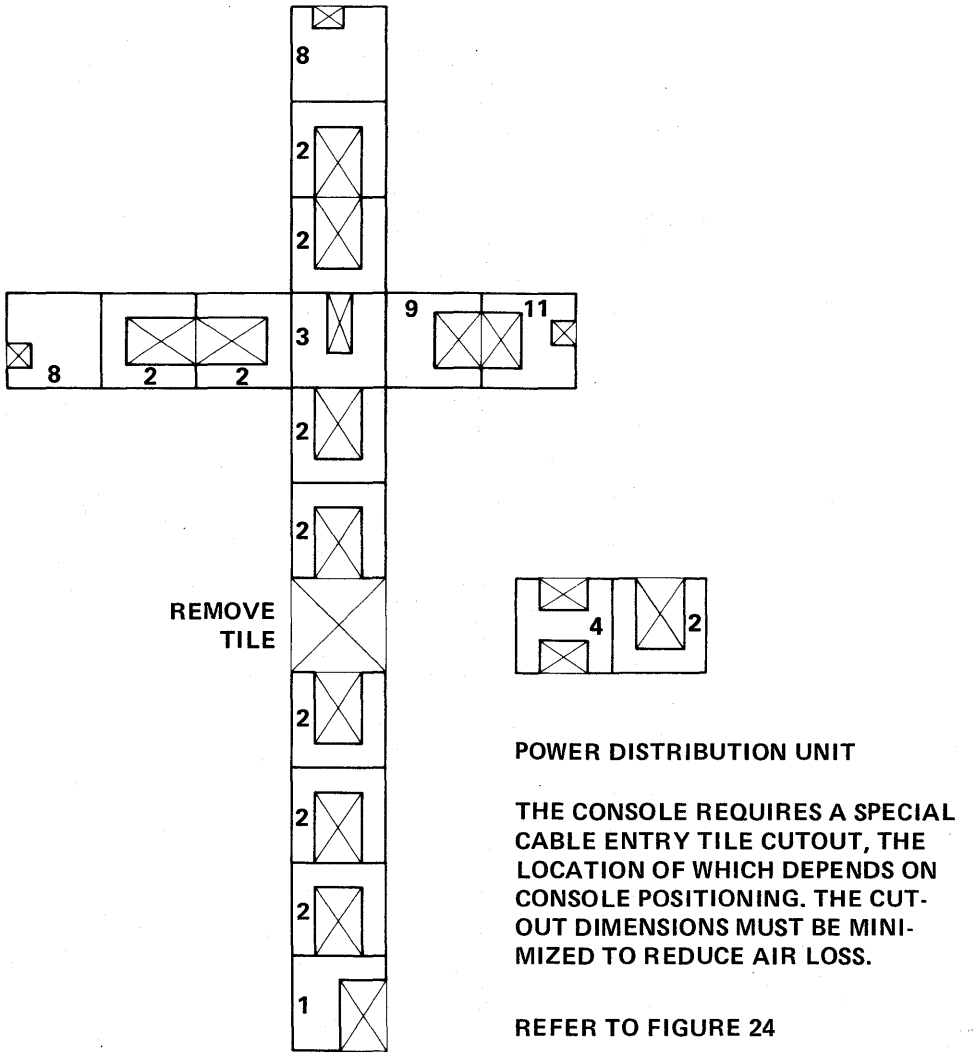
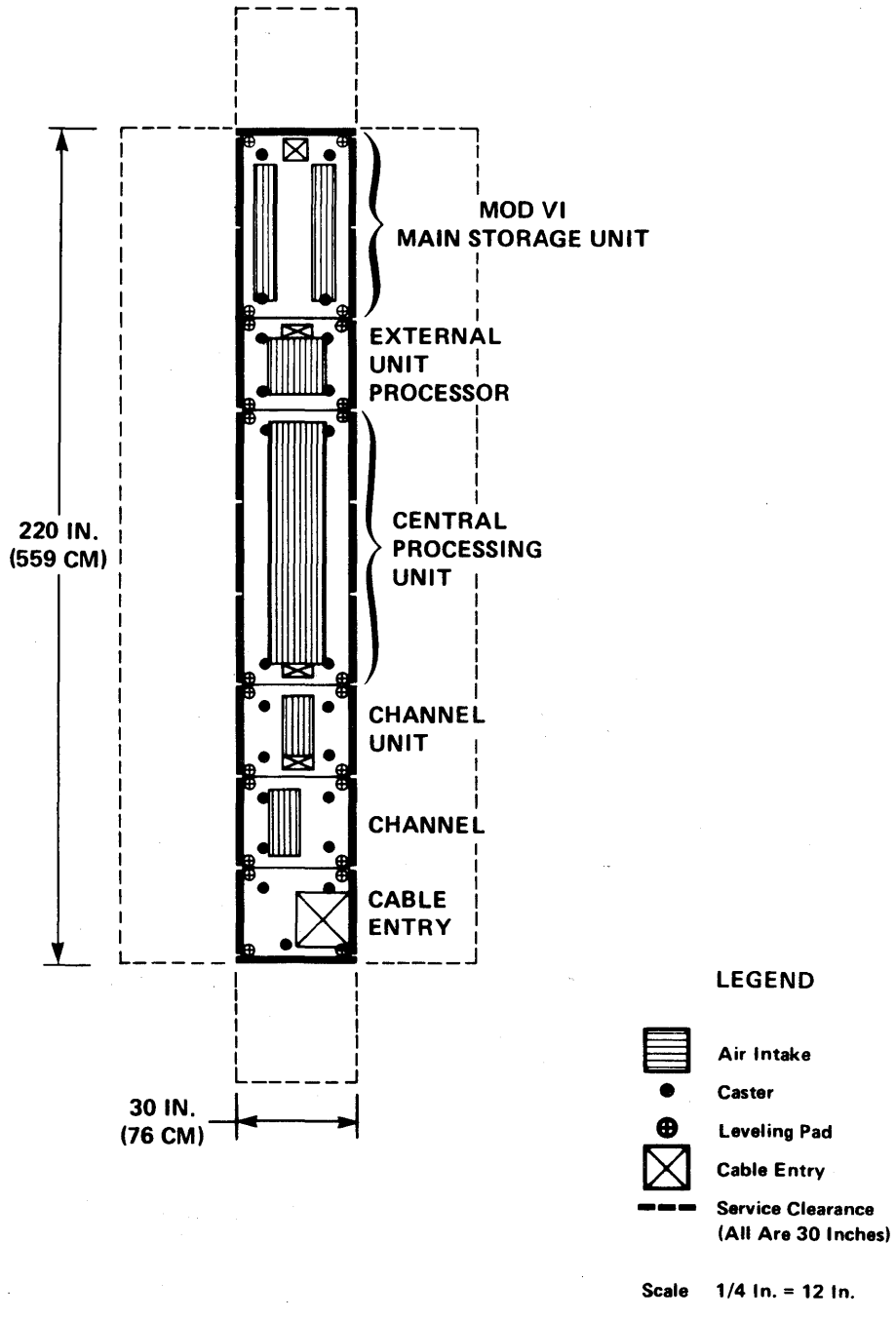


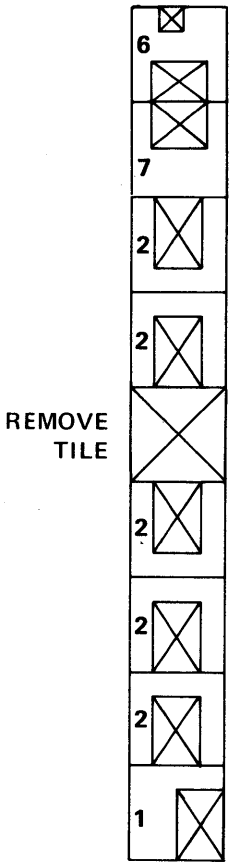
Figure 25. V/5 and V/6 Alternate Configuration 3, Raised-Floor Tile Installation Pattern.

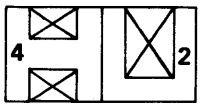


Note: Two, four, six, or eight megabytes Mod VI MSU only. Raised-floor tile cutouts for this configuration are shown in Figure 27. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02740

Figure 26. V/5 and V/6 Scale Layout Showing "Basic-I", Configuration 8





POWER DISTRIBUTION UNIT

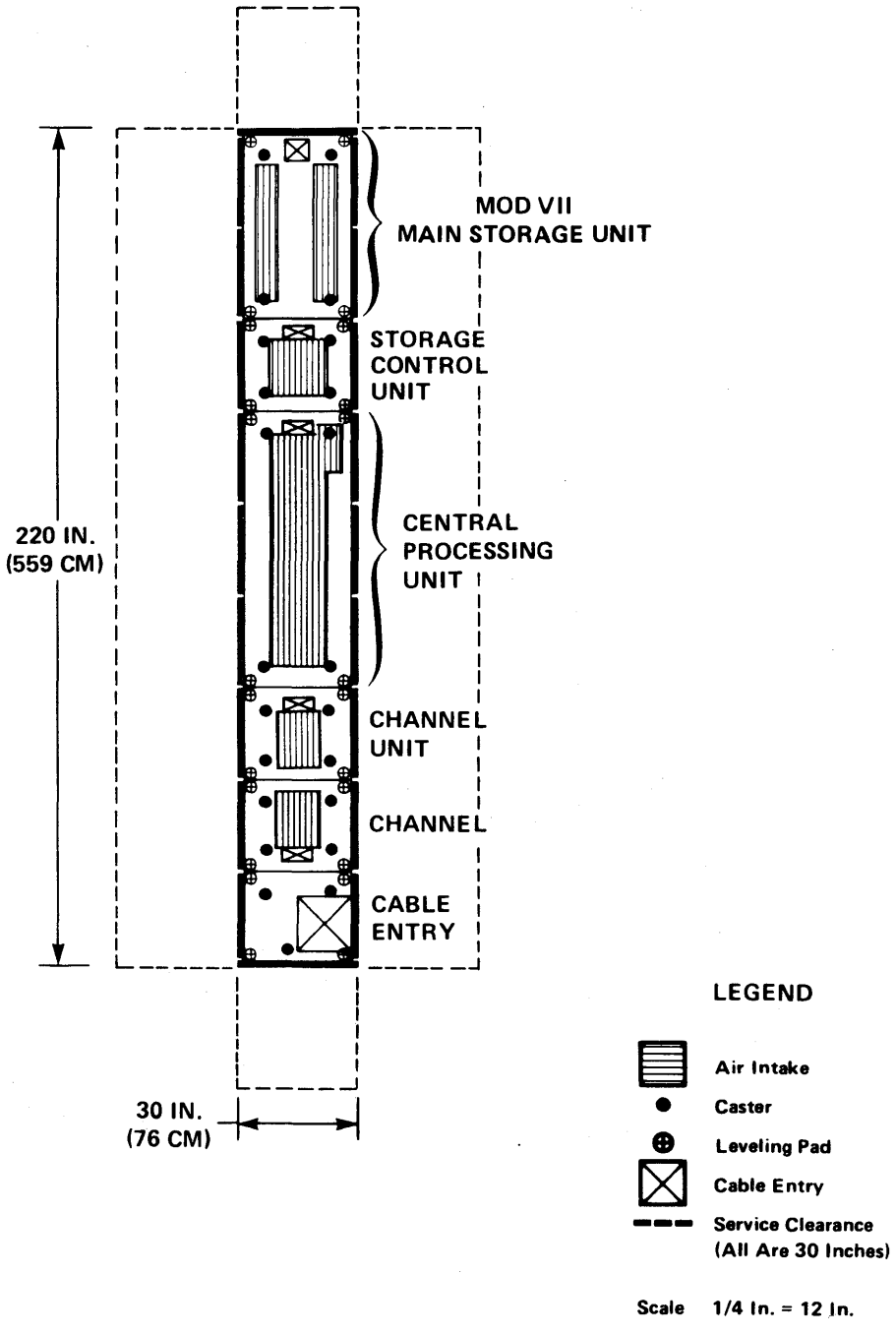
THE CONSOLE REQUIRES A SPECIAL CABLE ENTRY TILE CUTOUT, THE LOCATION OF WHICH DEPENDS ON CONSOLE POSITIONING. THE CUT-OUT DIMENSIONS MUST BE MINI-MIZED TO REDUCE AIR LOSS.

REFER TO FIGURE 26

REFER TO RAISED-FLOOR TILE CUTOUTS AT END OF BOOK FOR DIMENSIONS

A02741

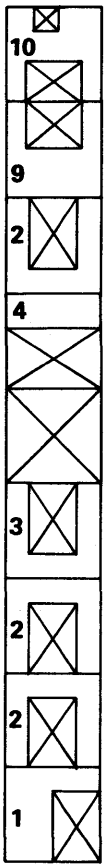
Figure 27. V/5 and V/6 Alternate Configuration 8. Raised-Floor Tile Installation Pattern.



Note: Mod VIIA or VIIB MSU. Raised-floor tile cutouts for this configuration are shown in Figure 29. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02742

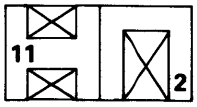
Figure 28. V/7 and V/8 Scale Layout Showing "Basic-I", Configuration 1 (Without Cable Duct)



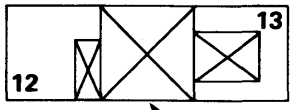
THE CONSOLE REQUIRES A SPECIAL CABLE ENTRY TILE CUTOUT, THE LOCATION OF WHICH DEPENDS ON CONSOLE POSITIONING. THE CUT-OUT DIMENSIONS MUST BE MINI-MIZED TO REDUCE AIR LOSS.

REFER TO FIGURE 28

PDU (MOD II – IV)



PDU (MOD V)



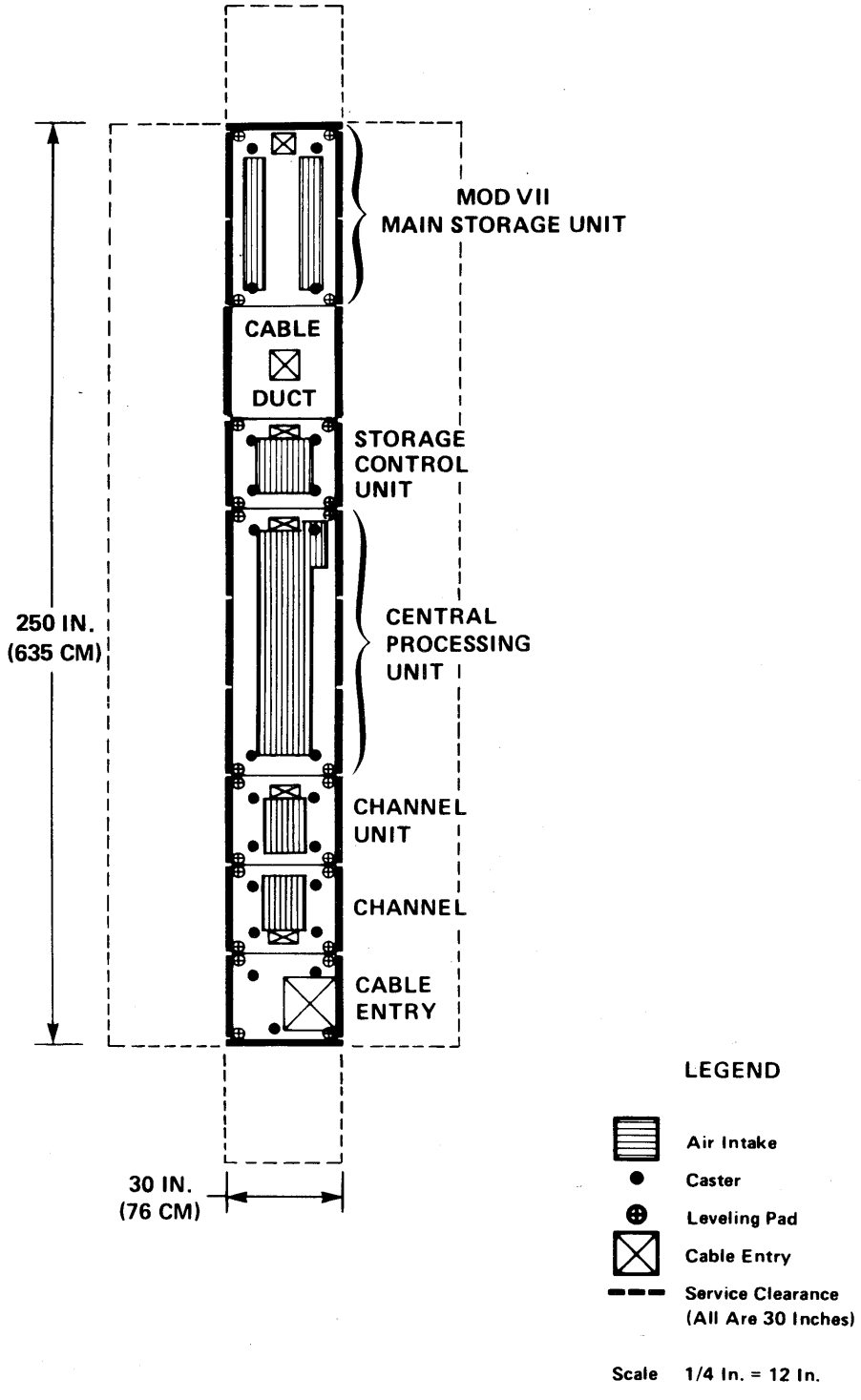
REMOVE TILE AFTER INSTALLING AND SECURING PDU.

POWER DISTRIBUTION UNIT

REFER TO RAISED-FLOOR TILE CUTOUTS AT END OF BOOK FOR DIMENSIONS

A02743

Figure 29. V/7 and V/8 Configuration 1, (Without Cable Ducts). Raised-Floor Tile Installation Pattern.



Note: Mod VIIA or VIIB MSU. Raised-floor tile cutouts for this configuration are shown in Figure 31. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02744

Figure 30. V/7 and V/8 Scale Layout Showing "Basic-I", Configuration 1 (With Cable Duct)

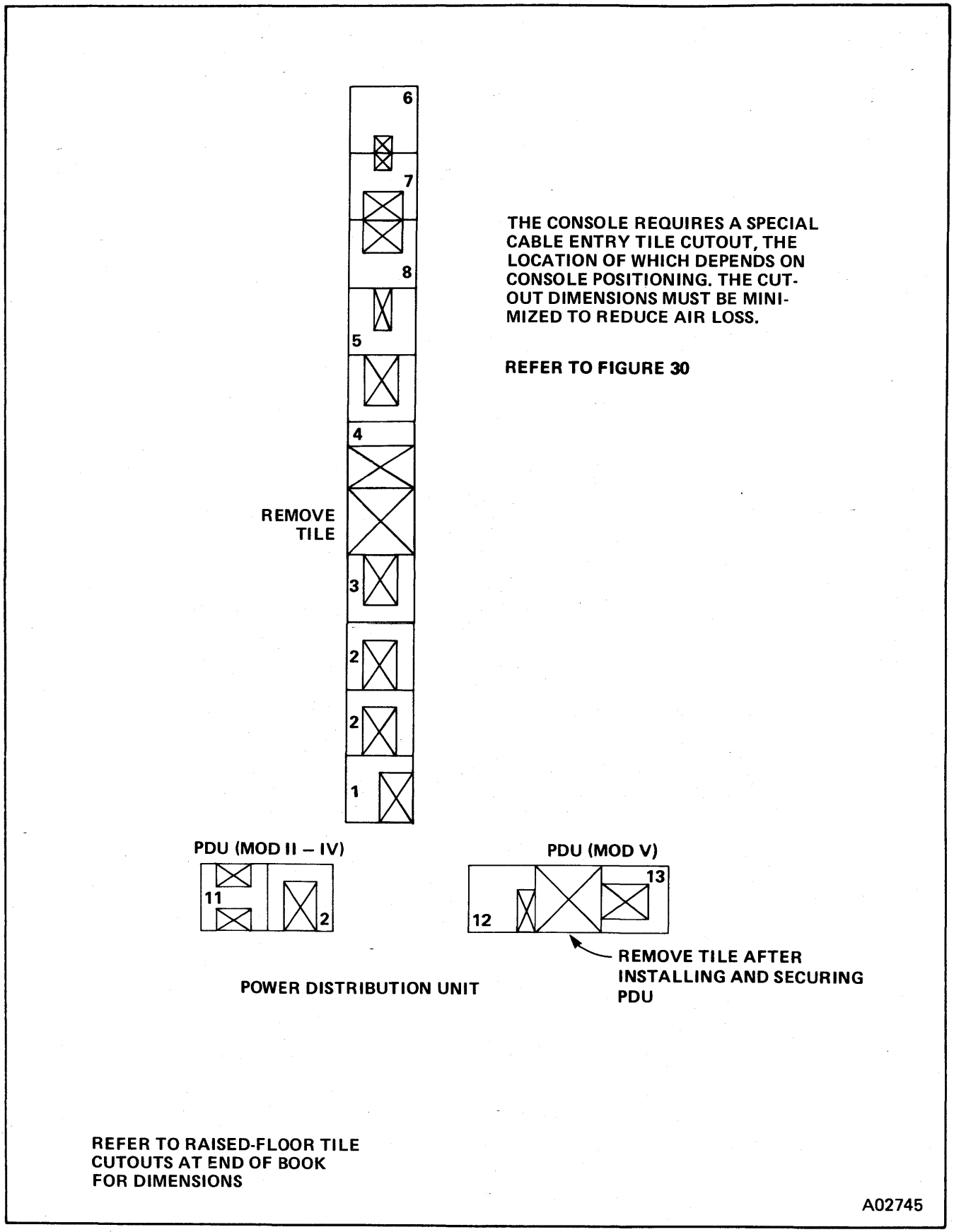
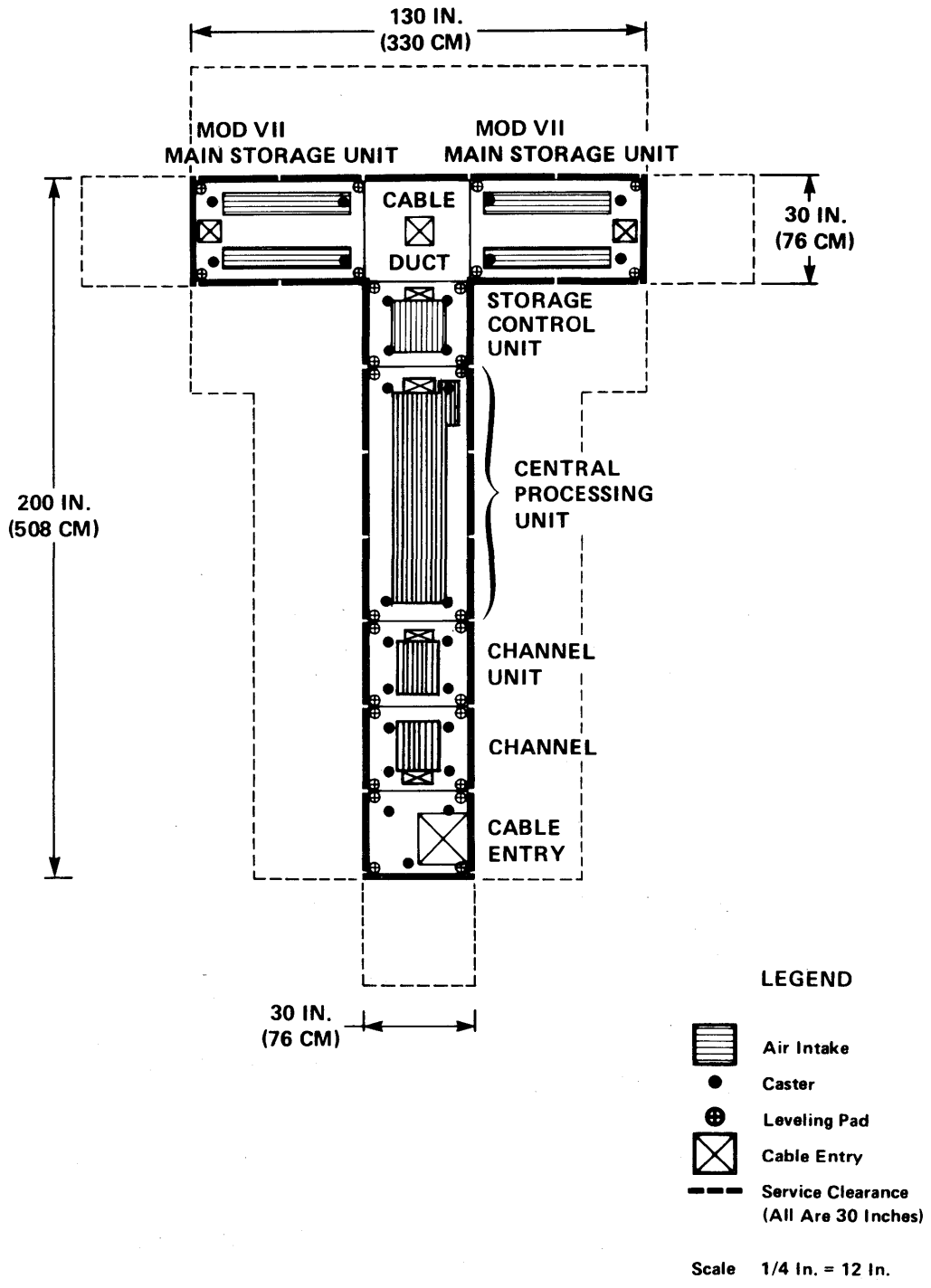


Figure 31. V/7 and V/8 Configuration 1, (With Cable Ducts). Raised-Floor Tile Installation Pattern.



Note: Mod VIIA or VIIB MSU, configuration 2. Raised-floor tile cutouts for this configuration are shown in Figure 33. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02746

Figure 32. V/7 and V/8 Scale Layout Showing "Basic-T", Configuration 2

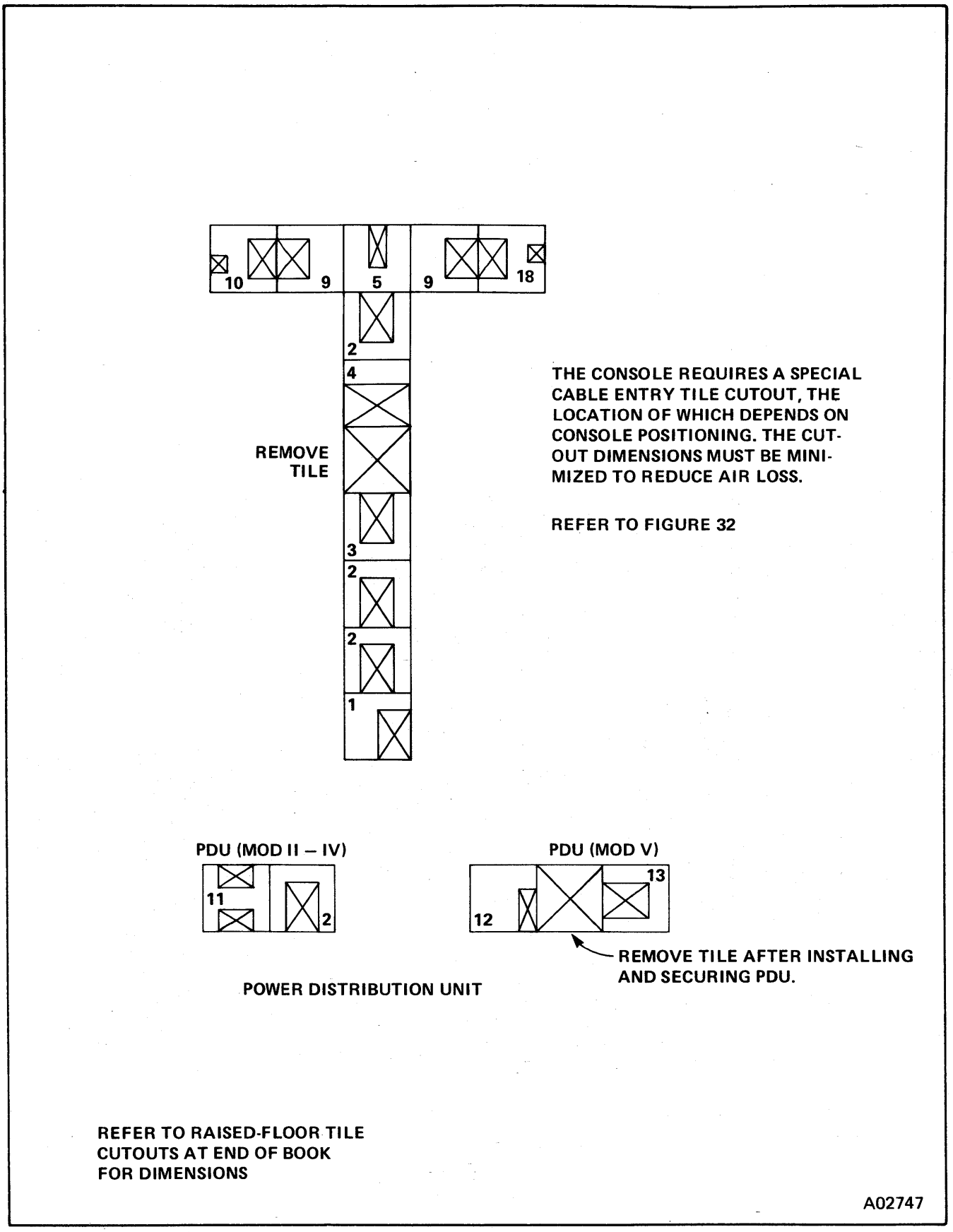
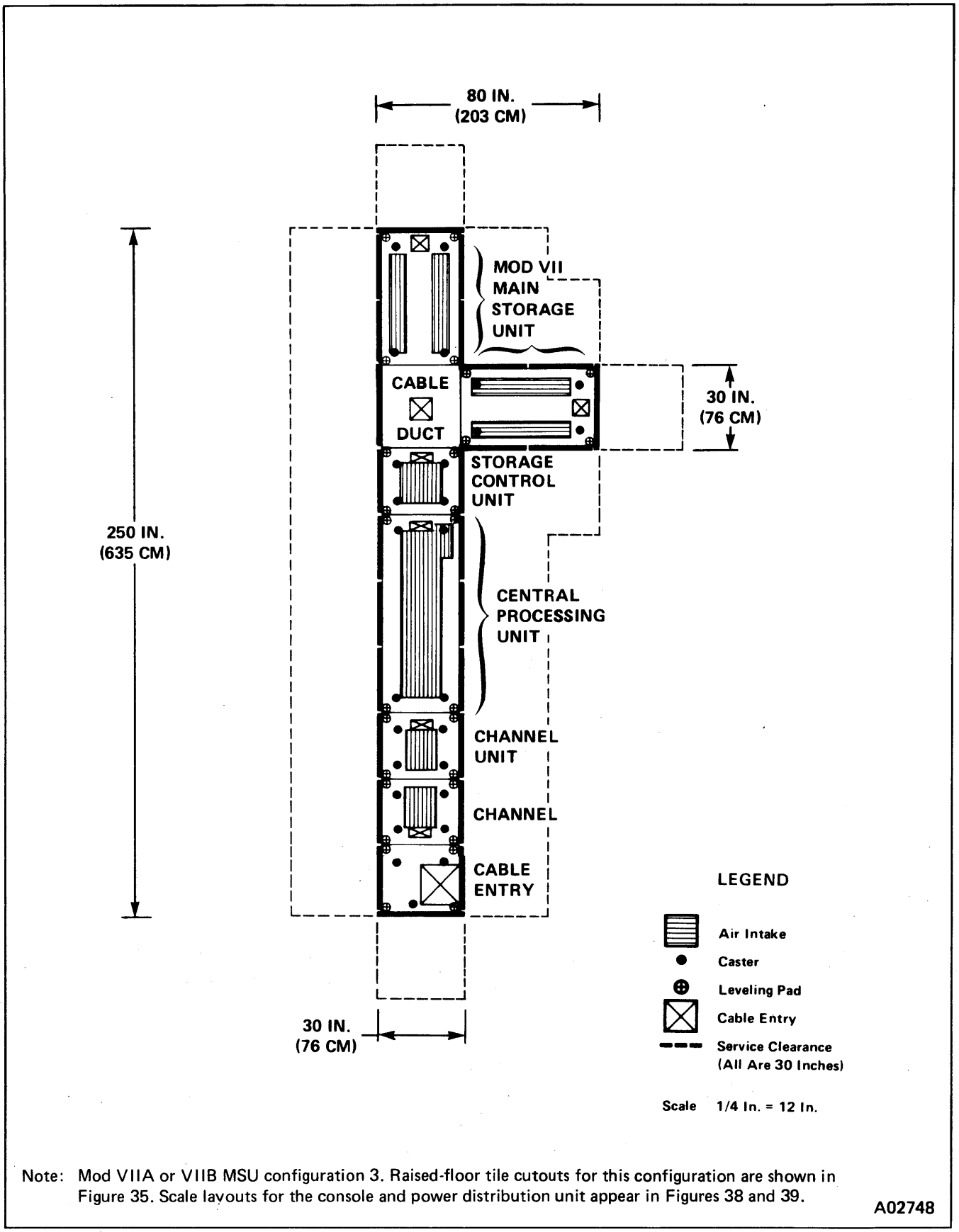


Figure 33. V/7 and V/8 Configuration 2, Raised-Floor Tile Installation Pattern.



Note: Mod VIIA or VIIB MSU configuration 3. Raised-floor tile cutouts for this configuration are shown in Figure 35. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02748

Figure 34. V/7 and V/8 Scale Layout Showing "Inverted-L", Configuration 3

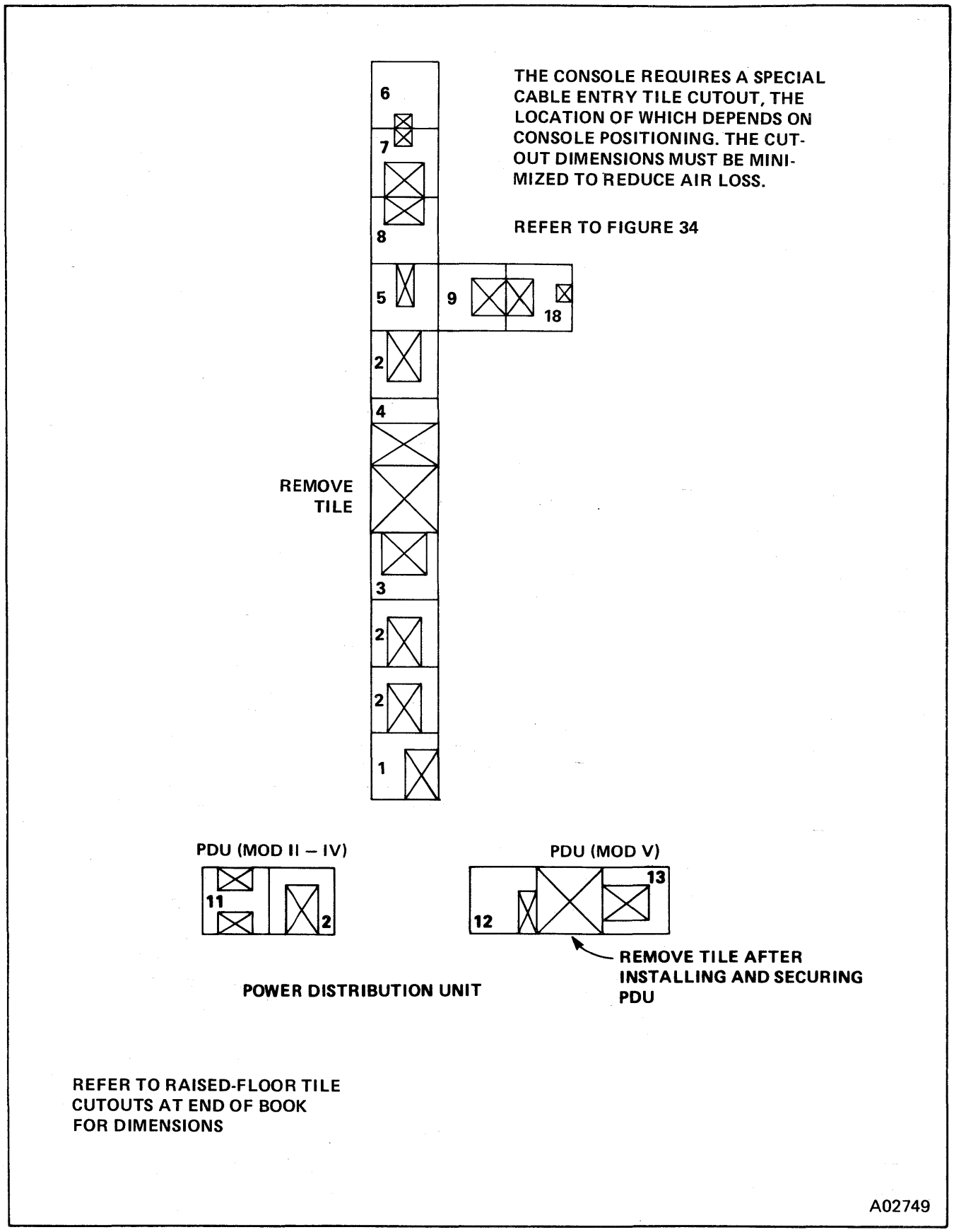
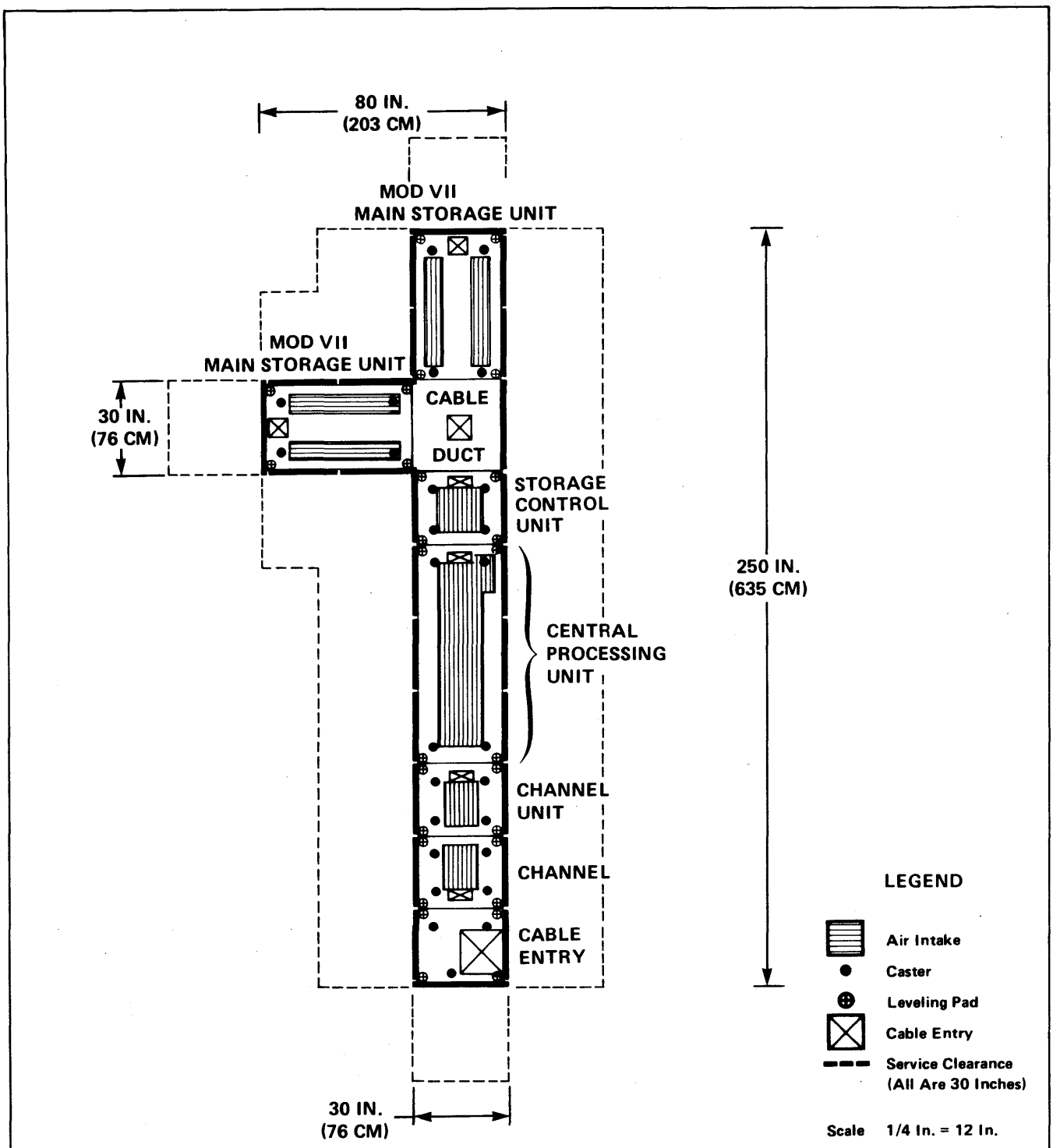


Figure 35. V/7 and V/8 Configuration 3. Raised-Floor Tile Installation Pattern.



Note: Mod VIIA or VIIB MSU alternate configuration 3. Raised-floor tile cutouts for this configuration are shown in Figure 37. Scale layouts for the console and PDU appear in Figures 38 and 39.

A02750

Figure 36. V/7 and V/8 Scale Layout Showing "Standard L", Alternate Configuration 3

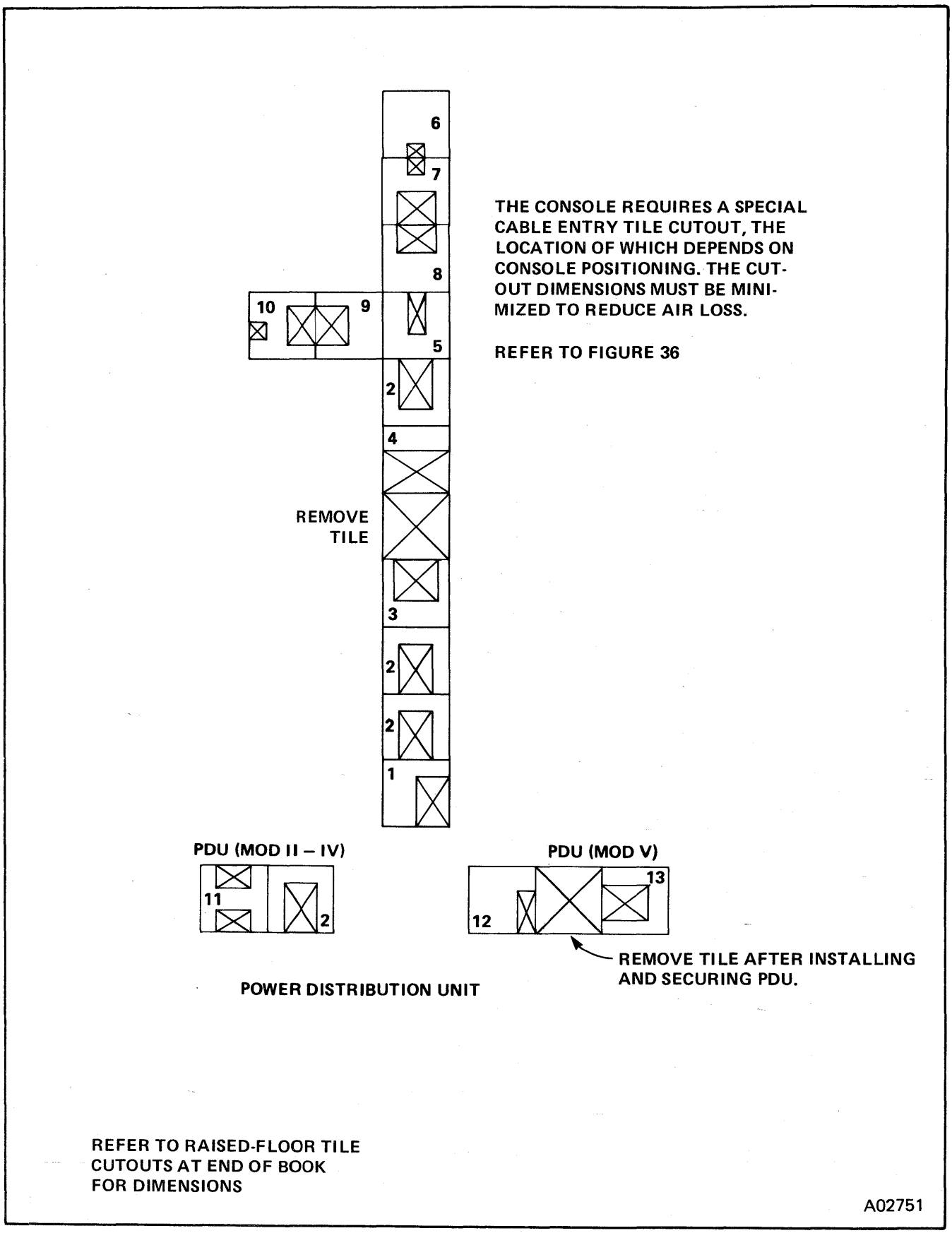
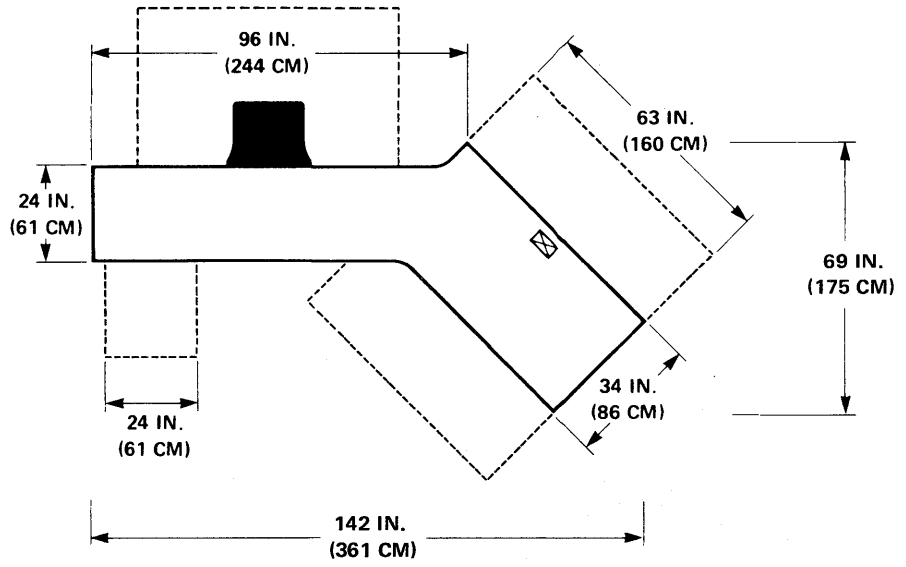


Figure 37. V/7 and V/8 Configuration 3. Raised-Floor Tile Installation Pattern.



LEGEND

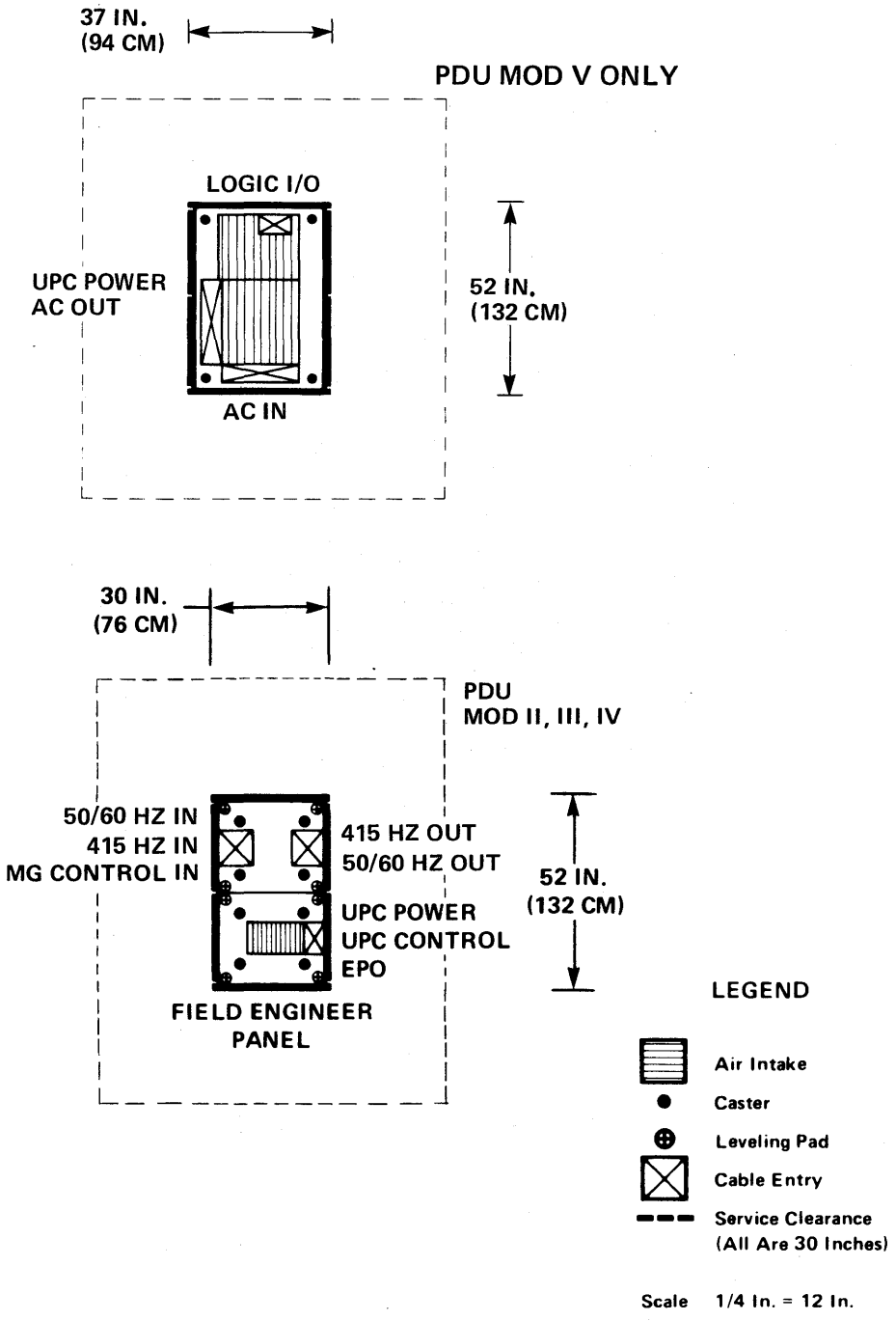
- Air Intake
- Caster
- Leveling Pad
- Cable Entry
- Service Clearance (All Are 30 Inches)

Scale 1/4 In. = 12 In.

Note: Raised-floor tile cutouts are not illustrated because their location depends upon the position of the console. The console requires a special cable entry tile cutout, the dimensions of which must be minimized to reduce air loss. Contact your Amdahl installation planning representative for more information.

A02752

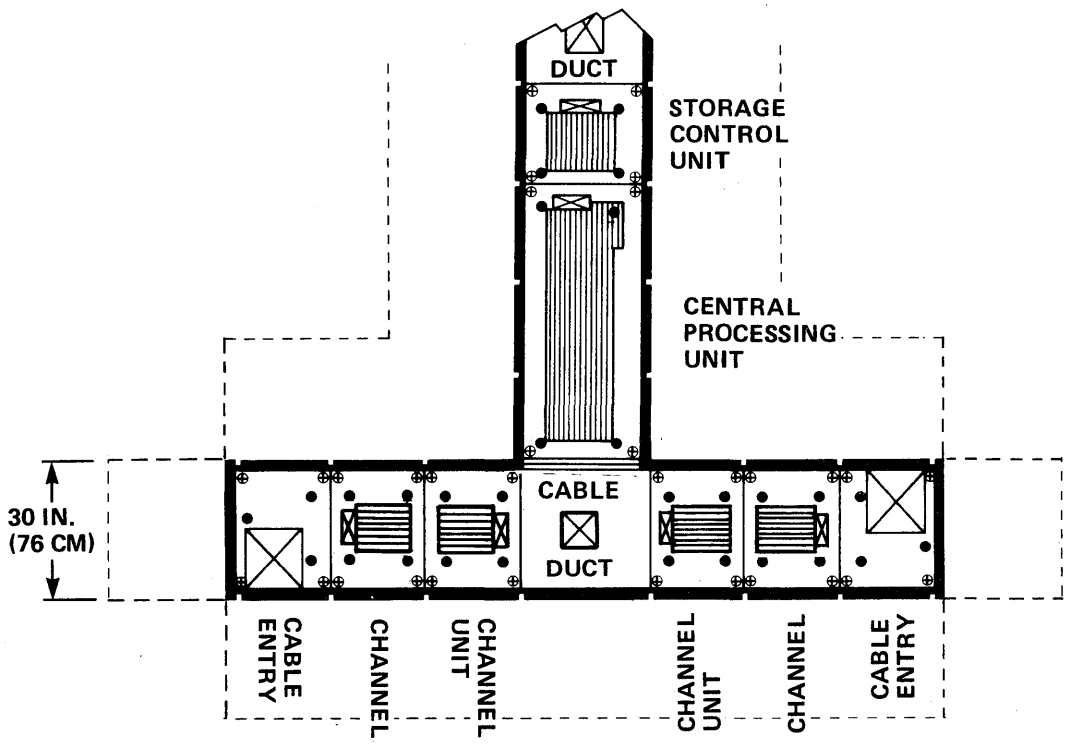
Figure 38. Console Scale Layout



Note: Raised-floor tile cutouts for these units appear with the cutouts for each computing-system configuration.

A02753

Figure 39. Power Distribution Unit Scale Layout



LEGEND

- Air Intake
- Caster
- Leveling Pad
- Cable Entry
- Service Clearance (All Are 30 Inches)

Scale 1/4 In. = 12 In.

Note: Refer to Figures 30 thru 37 for appropriate MSU configuration and floor tile pattern. Raised-floor tile pattern for this configuration is shown in Figure 41. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02754

Figure 40. V/7 and V/8 Scale Layout Showing "Basic T" Extended Channel Configuration.

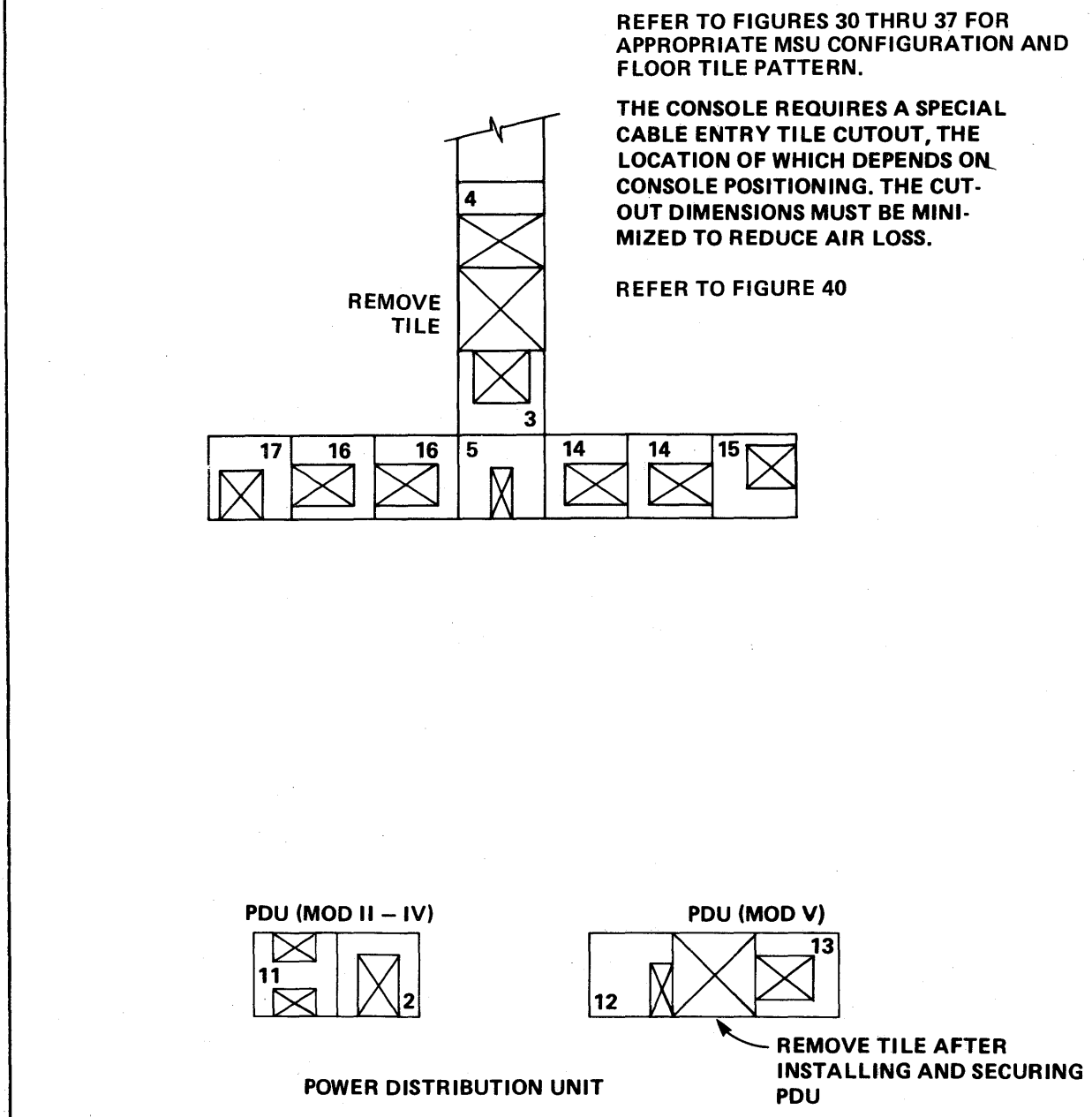
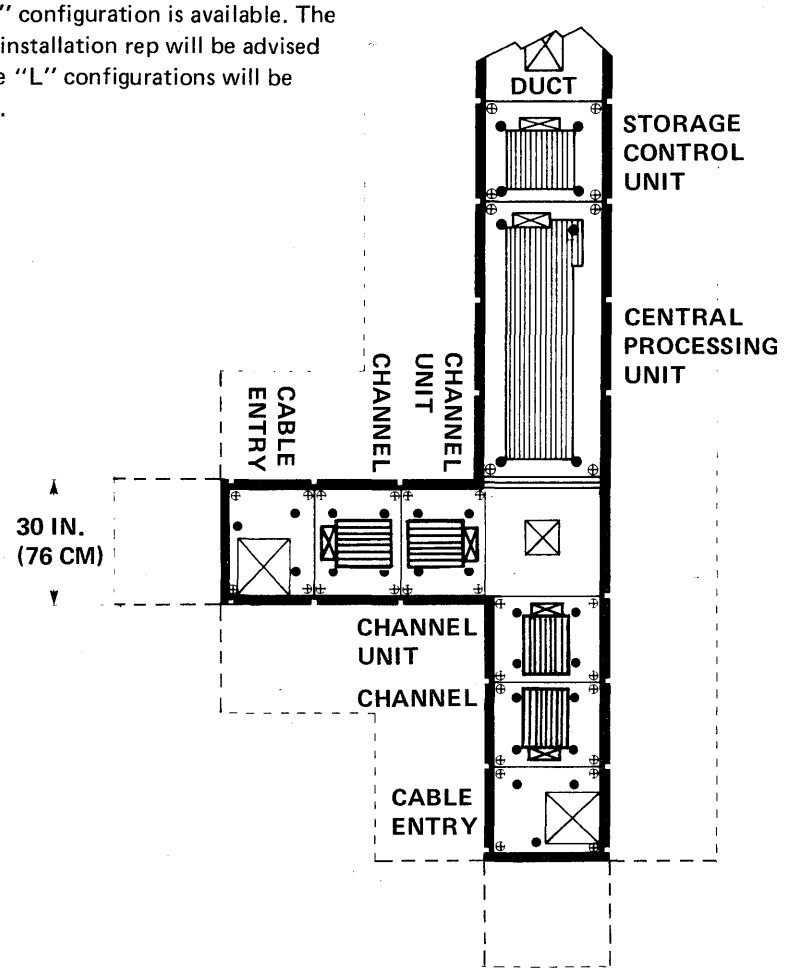


Figure 41. V/7 and V/8 Extended Channel Configuration. Raised-Floor Tile Installation Pattern.

NOTE

Only "T" configuration is available. The Amdahl installation rep will be advised when the "L" configurations will be available.



LEGEND

- Air Intake
- Caster
- Leveling Pad
- Cable Entry
- Service Clearance (All Are 30 Inches)

Scale 1/4 In. = 12 In.

Note: Raised-floor tile pattern for this configuration is shown in Figure 43. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02756

Figure 42. V/7 and V/8 Scale Layout Showing "Standard L" Extended Channel Configuration.

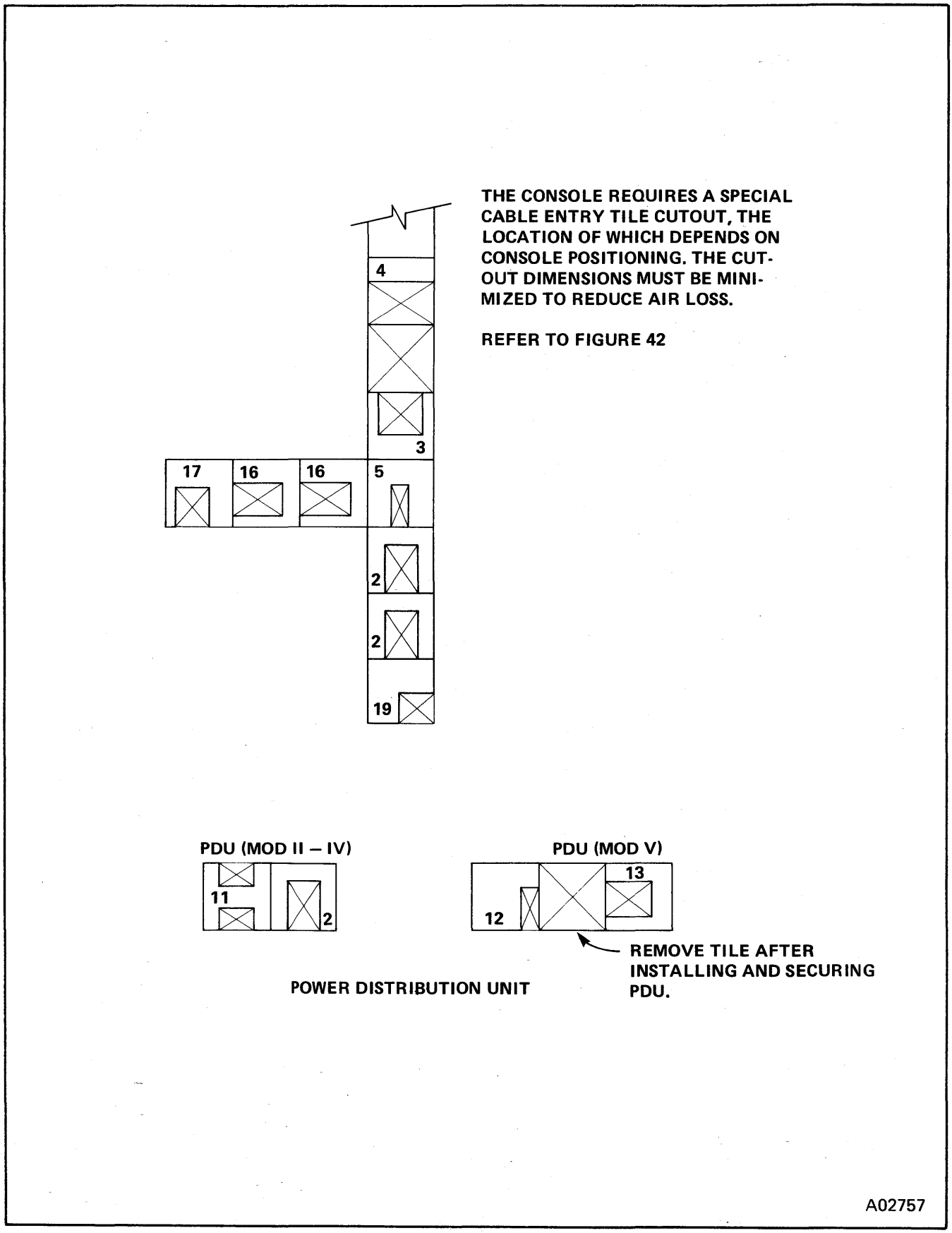
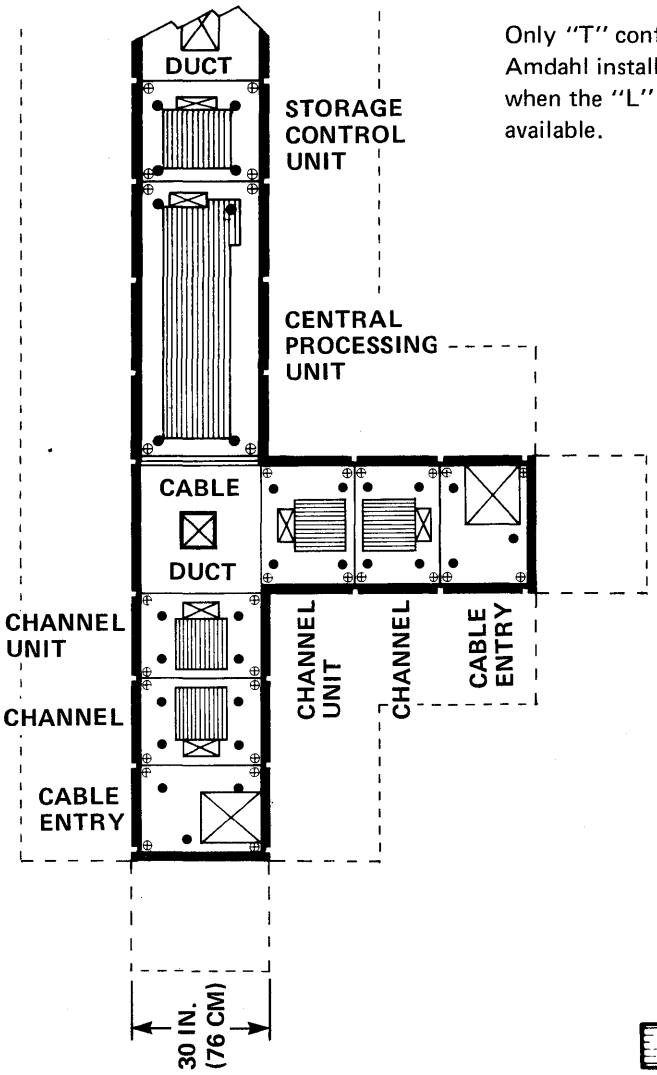


Figure 43. V/7 and V/8 "Standard L" Extended Channel Configuration Raised-Floor Tile Pattern



NOTE

Only "T" configuration is available. The Amdahl installation rep will be advised when the "L" configurations will be available.

LEGEND

- Air Intake
- Caster
- Leveling Pad
- Cable Entry
- Service Clearance (All Are 30 Inches)

Scale 1/4 In. = 12 In.

Note: Raised-floor tile pattern for this configuration is shown in Figure 45. Scale layouts for the console and power distribution unit appear in Figures 38 and 39.

A02758

Figure 44. V/7 and V/8 Scale Layout Showing "Inverted L" Extended Channel Configuration.

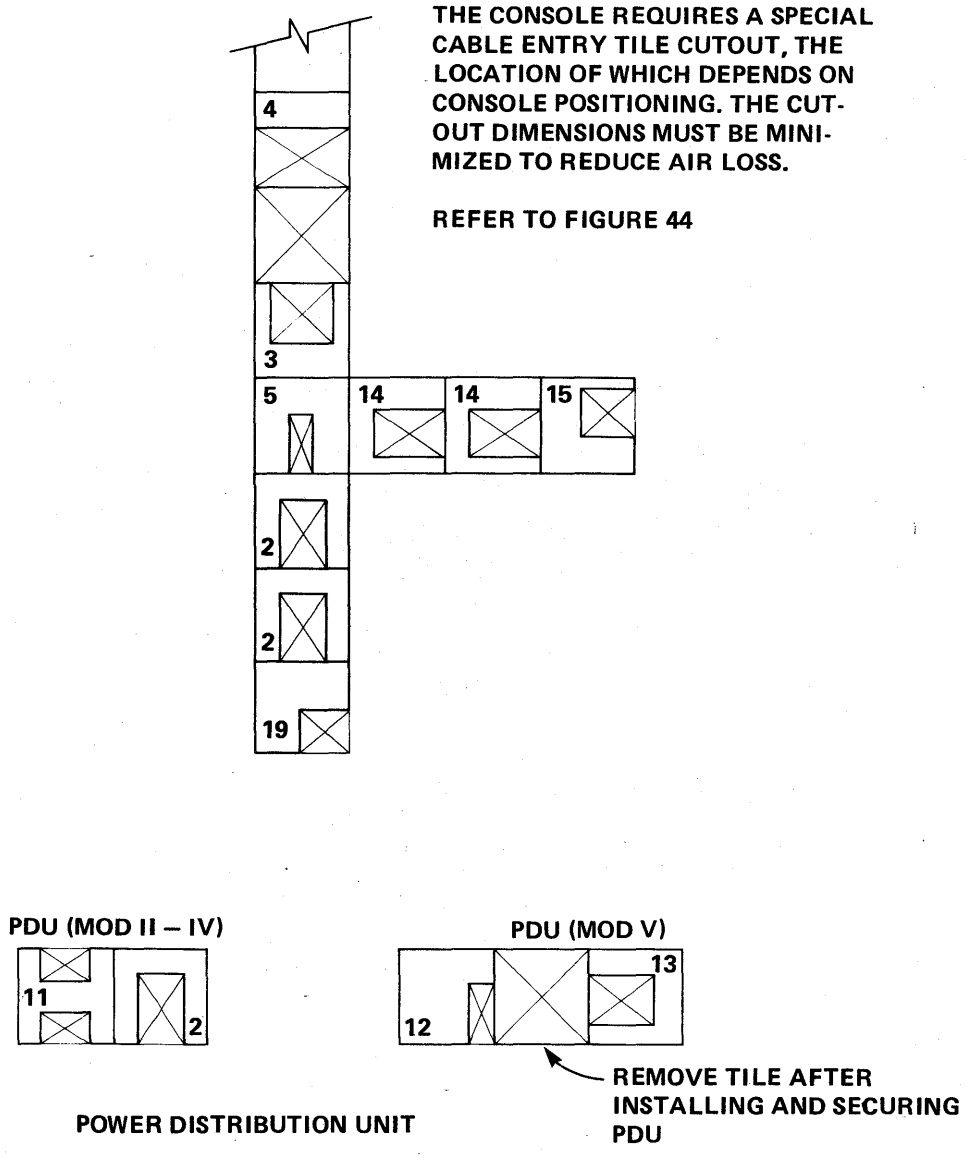


Figure 45. V/7 and V/8 "Inverted L" Extended Channel Configuration Raised-Floor Tile Pattern

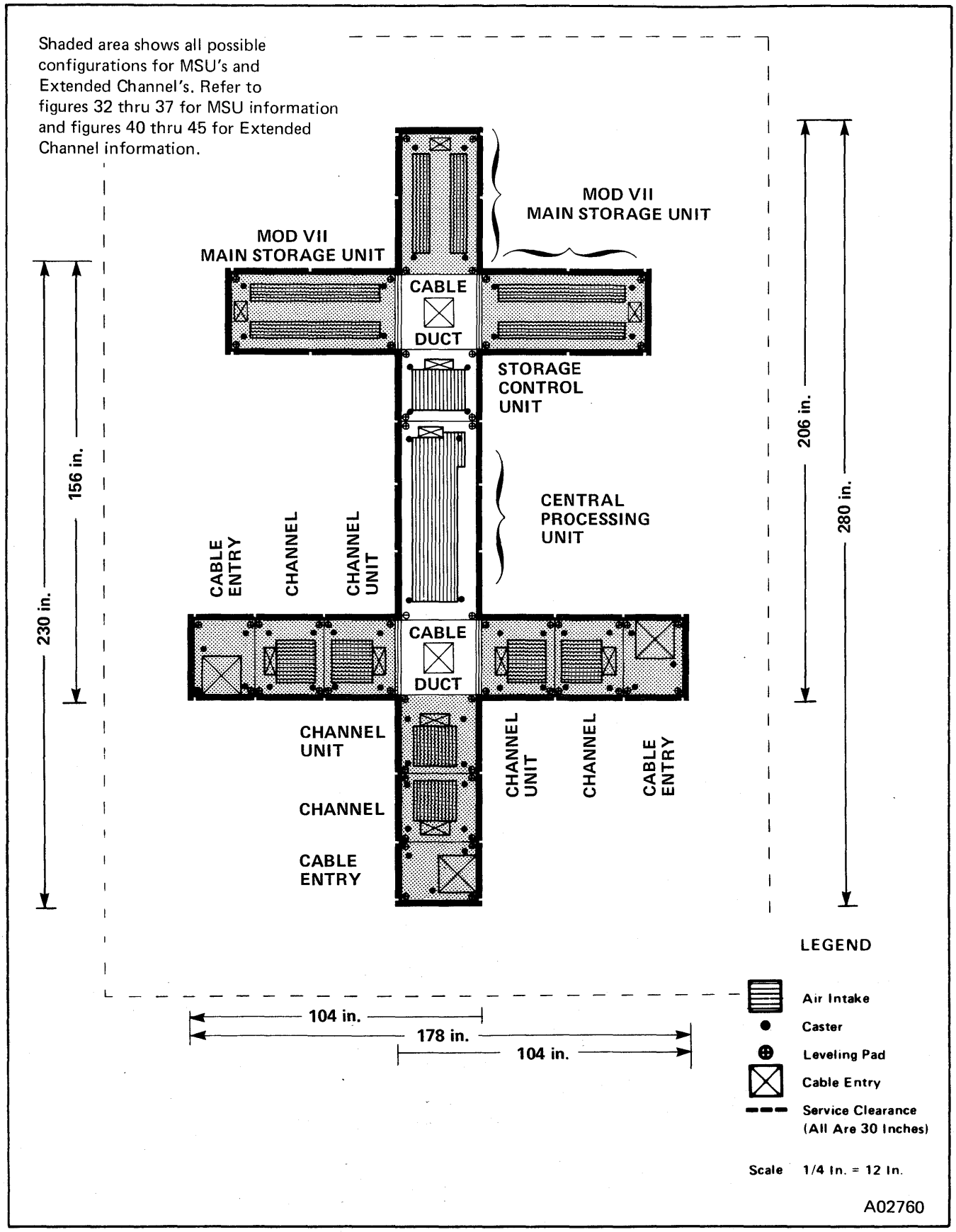


Figure 46. V/7 and V/8 Scale Layout Showing "Basic-T", "Inverted-L" and "Standard L" Configurations for Extended Channels.

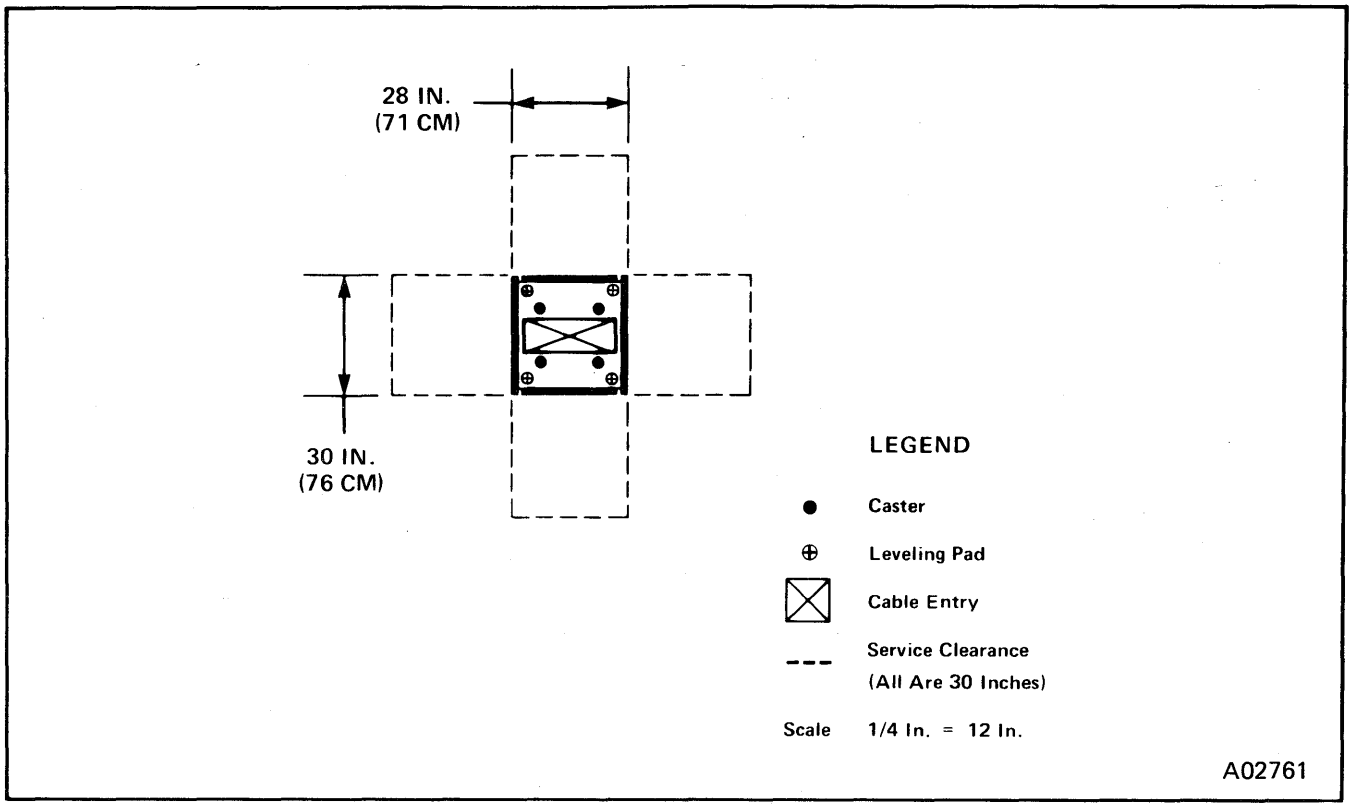


Figure 47. V/7, V/8 HMI (Option) Scale Layout

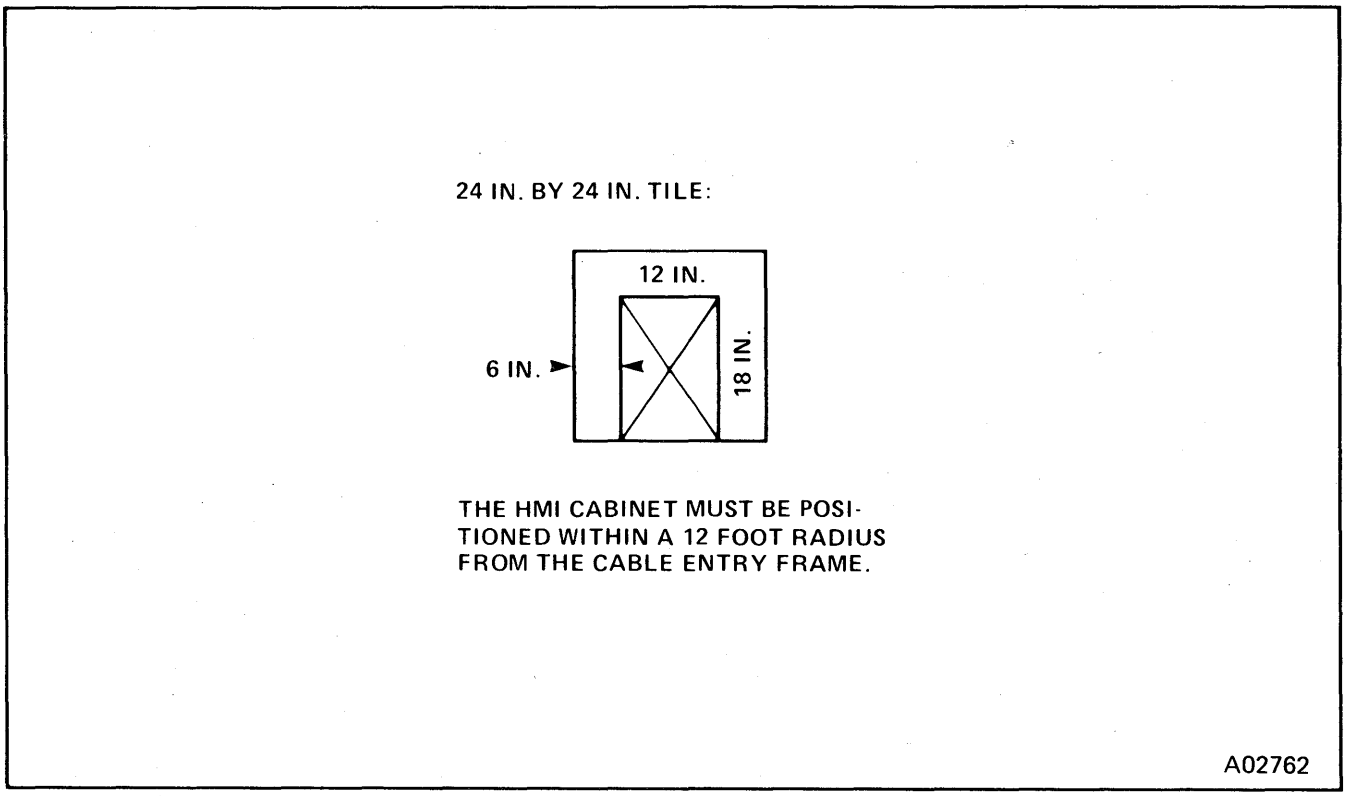
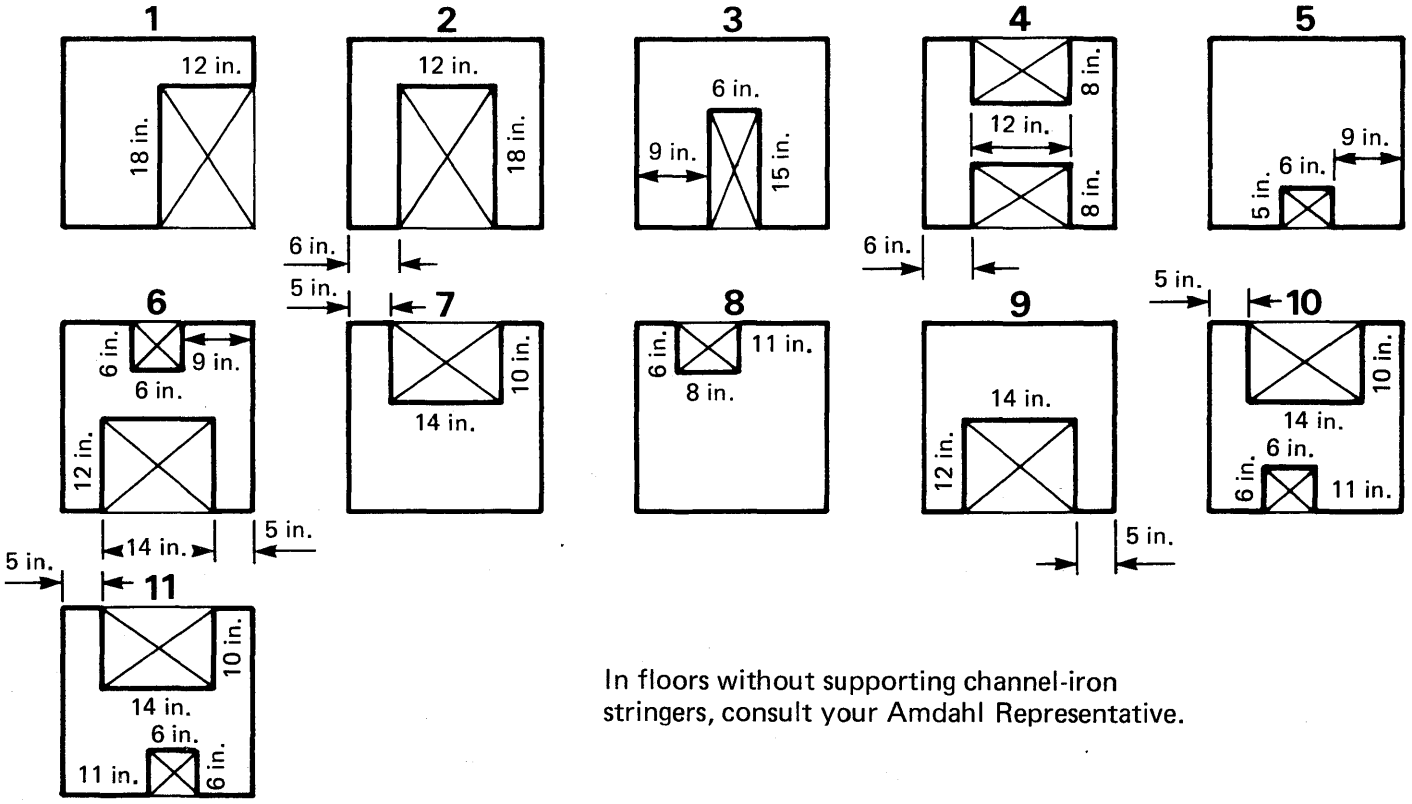


Figure 48. HMI (Option), Raised-Floor Tile Cutout

Floor Tile Cutout Dimensions By Tile Number
(All Tiles Are 24 in. By 24 in.)



In floors without supporting channel-iron stringers, consult your Amdahl Representative.

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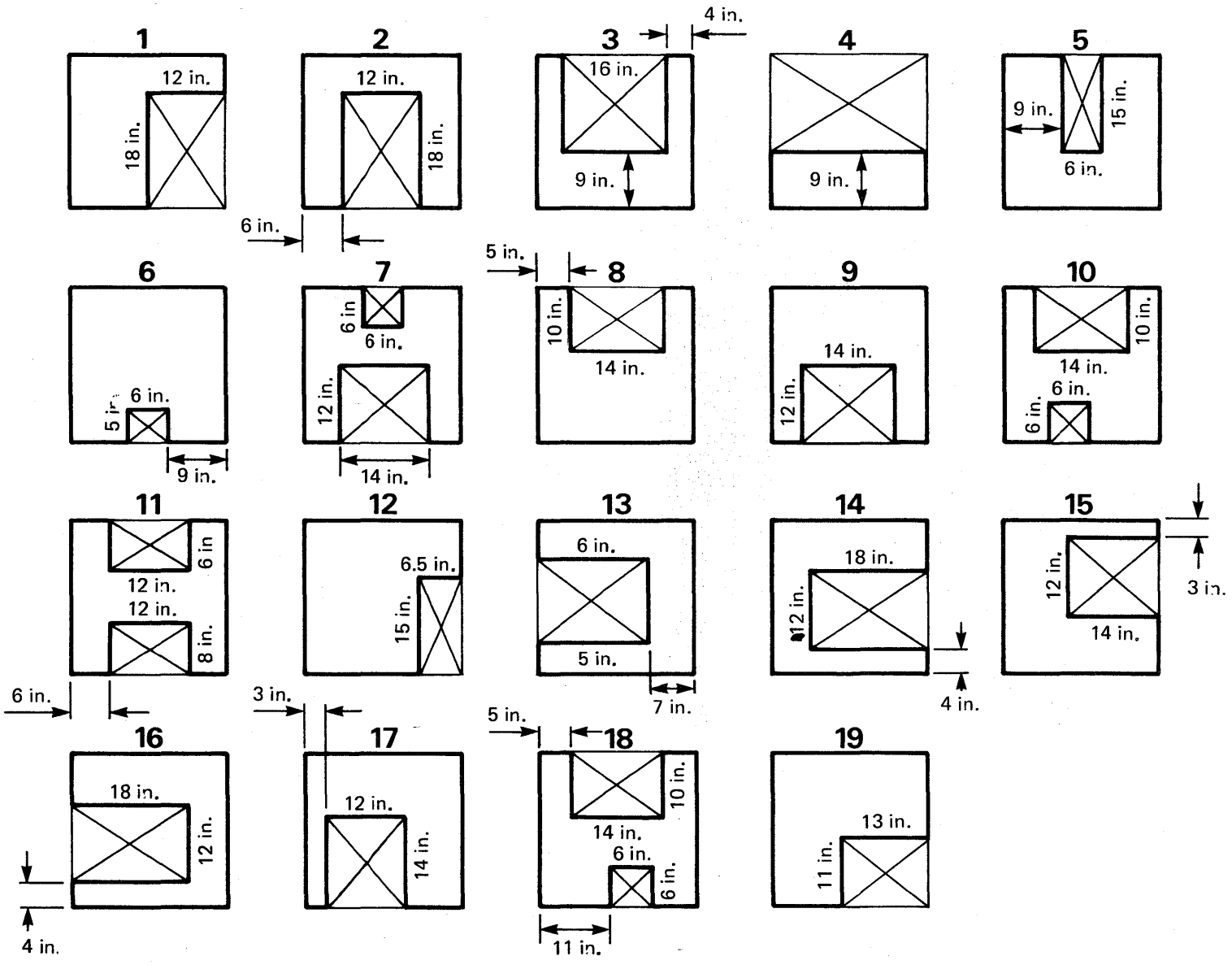
FIGURE 49. V/5 and V/6 Raised-Floor Tile Cutout Dimensions

Floor-Tile Cutout Dimensions By Tile Number
(All Tiles Are 24 in. by 24 in.).



In floors without supporting channel-iron stringers, consult your Amdahl Representative.

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FIGURE 50. V/7 and V/8 Raised-Floor Tile Cutout Dimensions

GLOSSARY

AMDAC	Amdahl Diagnostic Assistance Center	Hz	Hertz
AWG	American Wire Gauge	in	Inch
Btu	British Thermal Unit	kg	Kilogram
C	Centigrade	kVA	Kilovoltamperes
CE	Cable Entry Unit	lbs	Pounds
cm	Centimeter	MOD	Model
CFM	Cubic Feet Per Minute	mm	Milimeter
CPU	Central Processor Unit	MSU	Main Storage Unit
CRT	Cathode Ray Tube	PDU	Power Distribution Unit
EPO	Emergency Power Off	SCU	Storage Control Unit
EUP	External Unit Processor	TB	Terminal Board
F	Fahrenheit	Vdc	Volts, direct current
HMI	Hardware Measurement Interface	Vac	Volts, alternating current
hr	Hour	UPC	Unit Power Controller
		#	AWG wire size

REVISION HISTORY

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