



GE Medical Systems

Technical Publications

Direction 2268297

Revision 1

GE 0.7T *OpenSpeed* Magnet Mounting Plate Installation

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Operating Documentation

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- VERSUCHEN SIE NICHT, DAS GERÄT ZU REPARIEREN, BEVOR DIESES KUNDENDIENST-HANDBUCH NICHT ZU RATE GEZOGEN UND VERSTANDEN WURDE.
- WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH ELEKTRISCHE SCHLÄGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.

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- SI ALGÚN PROVEEDOR DE SERVICIOS AJENO A GEMS SOLICITA UN IDIOMA QUE NO SEA EL INGLÉS, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCIÓN.
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- LA NO OBSERVANCIA DEL PRESENTE AVISO PUEDE DAR LUGAR A QUE EL PROVEEDOR DE SERVICIOS, EL OPERADOR O EL PACIENTE SUFRAN LESIONES PROVOCADAS POR CAUSAS ELÉCTRICAS, MECÁNICAS O DE OTRA NATURALEZA.

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- ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.
- SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEMS, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.
- NÃO TENHA TENTADO REPARAR O EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO ESTE MANUAL DE ASSISTÊNCIA TÉCNICA.
- O NÃO CUMPRIMENTO DESTA AVISO PODE POR EM PERIGO A SEGURANÇA DO TÉCNICO, OPERADOR OU PACIENTE DEVIDO A CHOQUES ELÉTRICOS, MECÂNICOS OU OUTROS.

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- IL PRESENTE MANUALE DI MANUTENZIONE È DISPONIBILE SOLTANTO IN INGLESE.
- SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEMS RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE È TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.
- SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO.
- NON TENERE CONTO DELLA PRESENTE AVVERTENZA POTREBBE FAR COMPIERE OPERAZIONI DA CUI DERIVINO LESIONI ALL'ADDETTO ALLA MANUTENZIONE, ALL'UTILIZZATORE ED AL PAZIENTE PER FOLGORAZIONE ELETTRICA, PER URTI MECCANICI OD ALTRI RISCHI.

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REVISION HISTORY

REV	DATE	PRIMARY REASON FOR CHANGE
A	Feb. 28, 2000	A Release
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1	Dec. 8, 2000	Plate and floor dimensional changes

LIST OF EFFECTIVE PAGES

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SECTION 1 - INTRODUCTION

1-1 INTRODUCTION

The GE 0.7T *OpenSpeed* Magnet requires a Magnet Mounting Plate to be installed and secured to the floor in conformance with the procedure in this document prior to delivery of the magnet.

Location and orientation of this plate as specified in the SIGNA *OpenSpeed* Pre-Installation Manual (Direction 2241391) is critical for alignment of the patient swing table, routing of electrical cables and gas lines, RF Shield Room integrity requirements and proper location of anchor studs to prevent interference with the floor rebar.

All dimensions shown throughout manual are in inches. All bracketed () dimensions are in millimeters.

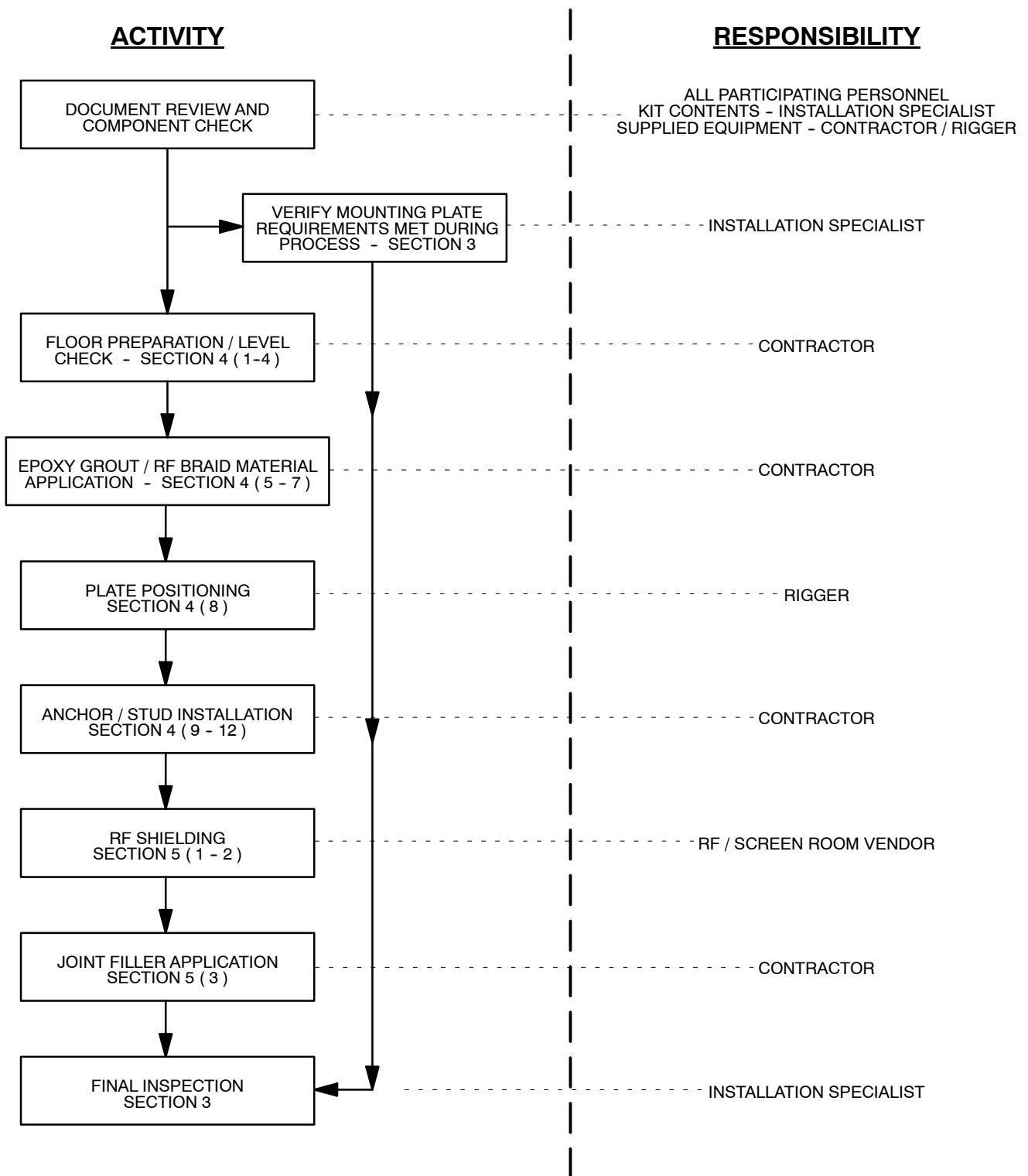


SAFETY SHOES AND LEATHER GLOVES MUST BE WORN WHEN HANDLING THE MOUNTING PLATE TO PREVENT PERSONAL INJURY.

RUBBER (CHEMICAL RESISTANT) GLOVES MUST BE WORN WHEN CLEANING MOUNTING PLATE AND RF SHIELD WITH ISOPROPANOL AND WHEN MIXING AND HANDLING EPOXY GROUT AND JOINT FILLER TO PREVENT EXPOSURE TO THE SKIN.

SAFETY GLASSES MUST BE WORN WHEN DRILLING ANCHOR HOLES, CLEANING MOUNTING PLATE AND RF SHIELD WITH ISOPROPANOL AND WHEN MIXING AND HANDLING GROUT AND JOINT FILLER TO PREVENT MATERIAL FROM COMING IN CONTACT WITH THE EYES.

1-2 MOUNTING PLATE INSTALLATION PROCESS / RESPONSIBILITY FLOWCHART



MOUNTING PLATE INSTALLATION PROCESS / RESPONSIBILITY FLOWCHART

ILLUSTRATION 1-1

1-3 RF SHIELD ROOM REQUIREMENTS

Overview and Background Information:

All GE MR systems require an RF enclosure which is commonly called a RF Shielded Room or a RF Screen Room. RF signals from sources outside of the RF Shielded Room are attenuated so they do not interfere with the MR system. Likewise, the RF signals produced by the MR scanner are kept from interfering with other RF devices. This RF quiet environment is necessary for the MR system to produce quality images.

RF Shield Rooms come in a variety of shapes and sizes but the feature they all have in common is a total RF shield produced by one continuous ground plane. This is achieved by making the Magnet Mounting Plate, walls, floor, doors and ceiling out of an electrically conductive material such as copper, aluminum, brass, or steel. All the room components (the Magnet Mounting Plate, walls, floor, ceiling, etc.) must be electrically bonded together to form one solid, common ground plane. Once this is established the ground plane is then tied to earth ground to create the RF Shield. This ground point is known as the PRIMARY ground. The primary grounding technique works well for any battery powered devices that may be operated within the RF Shield Room. Devices requiring facility power or the introduction of facility power into the Screen Room requires a change in the primary grounding technique for the RF Shield Room. The RF Shield Room must now be grounded back to the facility power ground.

The addition of water systems or other grounds required by the national electrical code will cause the RF Shield Room ground impedance to be ZERO ohms. These additional grounds that connect the outside of the RF Shield Room to earth grounds are called SECONDARY grounds. It is the secondary grounding that needs to be controlled. If the secondary ground introduces any current to the RF Shield, indicating the RF Shield is a better ground path than the secondary ground, then the current can set up electrical fields on the surface of the RF Shield which may cause image artifacts.

The equipment anchors are generally installed into the grade below the RF Shield Room because the floor thickness within the room does not provide the proper embedment depth. With this in mind the hardware used to anchor the equipment will be either a bolt or a stud. This hardware must penetrate the RF Shield and be in full contact with the shield thereby preventing RF leaks at the point of penetration. In this case, the anchoring hardware may be in direct electrical contact to the anchored equipment. The anchoring device that is set below the RF Shield Room floor must be isolated from ground. If it should come in contact with rebar or wire mesh and this in turn is contacting building steel, then a secondary ground has been established and needs to be corrected. The Magnet Mounting Plate is supplied with alternate mounting holes to assist in the avoidance of hidden rebar.

RF Shield Rooms that have the RF shield far enough below the finished floor in the room to allow the anchor to be installed without penetrating the shield have no issues with secondary grounding.

SECTION 2 - EQUIPMENT

2-1 MOUNTING PLATE KIT (2270346) COMPONENTS

Kit 2270346, consisting of the following:

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	2268297	MOUNTING PLATE INSTALLATION INSTRUCTIONS	1
2	2263220	MOUNTING PLATE	1
3	46-294151P46	EPOXY GROUT	2
4	2267987	ANCHOR STUD, 0.75 inch x 7.00 inch (19.1 mm x 177.8 mm)	24
5	46-294167P32	LIFTING EYE BOLT	4
6	46-258218P4	RF TAPE, 3 inches x 18 yards (76.2 mm x 16.5 M)	1
7	2275876	RF BRAID MATERIAL, 16.5 feet (5.03 M), Preformed	1
8	46-318068P1	BRONZE WOOL	3
9		MSDS SHEET - EPOXY GROUT	1

2-2 CONTRACTOR / RIGGER SUPPLIED EQUIPMENT

2-2-1 CONTRACTOR SUPPLIED EQUIPMENT

TABLE 2-1
CONTRACTOR SUPPLIED EQUIPMENT

Item	Description	Qty.
1	Ridge Pattern Trowels for spreading epoxy grout 0.15 inch to 0.20 inch (3.81 mm to 5.00 mm) thick	2
2	Carpenter Level, 6 feet (2.00 meters) long	1
3	Vacuum Cleaner with nozzle attachment for cleaning holes	1
4	Portable Grinder for anchor studs	1
5	Metal Files	2
6	Clean Rags (lint free) - minimum 12 inch x 24 inch (304 mm x 700 mm) size	10
7	Alcohol (Isopropanol)	1 qt. / 1 liter
8	Scotch-Brite or 000 steel wool pads	10
9	0.75 inch x 8.00 inch (19.1 mm x 203.2 mm) Masonry Drill Bits	2
10	0.75 inch (19.1 mm) Chucked Hammer Drill	1
11	2 lb. (0.91 kg) Hammer	1
12	Tape Measure 12 feet (4 meters) with .062 inch (1.57 mm) divisions	1
13	Ruler 12 inches (300 mm) long with 0.04 inch (1 mm) divisions	1
14	150 ft./lb. (200 N-M) capacity Torque Wrench	1
15	5 gallon (25 liter) Container for mixing epoxy	2
16	Mixing Paddles for mixing epoxy grout	3
17	Drill for mixing paddles	1
18	Rubber (chemical handling) Gloves per person handling epoxy / isopropanol	1 pr.
19	Leather Gloves for each person handling Magnet Mounting Plate	1 pr.
20	Safety Shoes per person handling Magnet Mounting Plate	1 pr.
21	Safety Glasses per person handling epoxy / isopropanol or anchor stud assembly	1 pr.

2-2-2 RIGGER SUPPLIED EQUIPMENT

The Rigger is responsible for supplying all lifting equipment (chains, hoist, gantry, forklift . . .) rated for 3500 pounds (1588 kg) or greater to move and position the Magnet Mounting Plate.

SECTION 3 - MOUNTING PLATE REQUIREMENTS

3-1 PHYSICAL REQUIREMENTS

IMPORTANT !!!

THE MAGNET MOUNTING PLATE MUST BE UTILIZED AS RF SHIELD UNDER THE MAGNET.

1. The Magnet Mounting Plate location and orientation must meet centerline and vent location requirements for the room. Centerline and vent locations are marked on the plate. The plate location (recessed area) on the floor must be flat and level within 0.08 inches (2.0 mm) over the entire surface. The epoxy grout must be uniformly spread 0.20 - 0.25 inch (5.08 - 6.35 mm) thick in the grout area shown in Illustration 4-1 to result in the plate being level within 0.08 inch (2.0 mm) at all four corners. See Illustration 3-1.
2. The Magnet Mounting Plate must be recessed into the floor in the area shown inside the dotted lines in Illustration 3-1. The remainder of room floor must be built up above the top of the plate in conformance with Table 3-1. A minimum depth of 18 inches (457 mm) of concrete is required in the Magnet Room. The minimum concrete depth under the mounting plate is 15.0 inches (381.0 mm) due to plate depression.
3. The Magnet Mounting Plate must be an integral part of the Magnet Room RF Shield. The RF shield material must extend under the full perimeter of the mounting plate for a distance of 1.00 inch (25.4 mm) minimum to 1.50 inch (38.1 mm) maximum. RF shield material must be insulated from the concrete floor.
4. Floor rebar must not be positioned within 1.5 inches (38.1 mm) of the "B" and "C" holes to a depth of 8.00 inches (203.2 mm) to prevent interference with mounting bolts. See Illustration 3-1.
5. The top surface of the Magnet Mounting Plate must be fully exposed under the circle of the magnet to allow for placement of pads between the Magnet Support Ring and the plate. The concrete floor surface must also be left exposed (i.e., no material over or under the RF shield material other than the insulation that must be under the RF shield material) in the Single-Stage Coldhead mounting and cable trough locations. See Illustrations 3-1, 3-2 and 3-3.
6. The floor area where the Single-Stage Coldhead will be mounted must meet the following specifications:
 - A. Entire floor area must be composed of concrete integral with concrete to which Magnet Mounting Plate is attached. This concrete must **not** be finished with any subflooring / flooring materials prior to mounting Coldhead. Coldhead cannot be mounted through materials other than RF Shield and Conductive Pad specified in the Delivery and Installation manual, Direction 2243897.
 - B. Surface area to be the same height as Magnet Mounting Plate within ± 0.5 inches (12.7 mm) and level within 0.08 inches (2 mm).
 - C. Area to have a minimum 18 inches (457 mm) depth of concrete which is integral with the Magnet Room concrete. The coldhead mounting area surface must not be covered by finished floor.
 - D. No rebar or metal components are allowed beneath the surface of coldhead mounting area. See Illustration 3-2.

3-1 PHYSICAL REQUIREMENTS (continued)



THE 0.7T MAGNET CANNOT BE HARD BOLTED TO THE MOUNTING PLATE AND MUST BE INSTALLED USING THE MAGNET MOUNTING KIT PROVIDED TO MEET THE VIBRATION SPECIFICATION REQUIREMENTS.

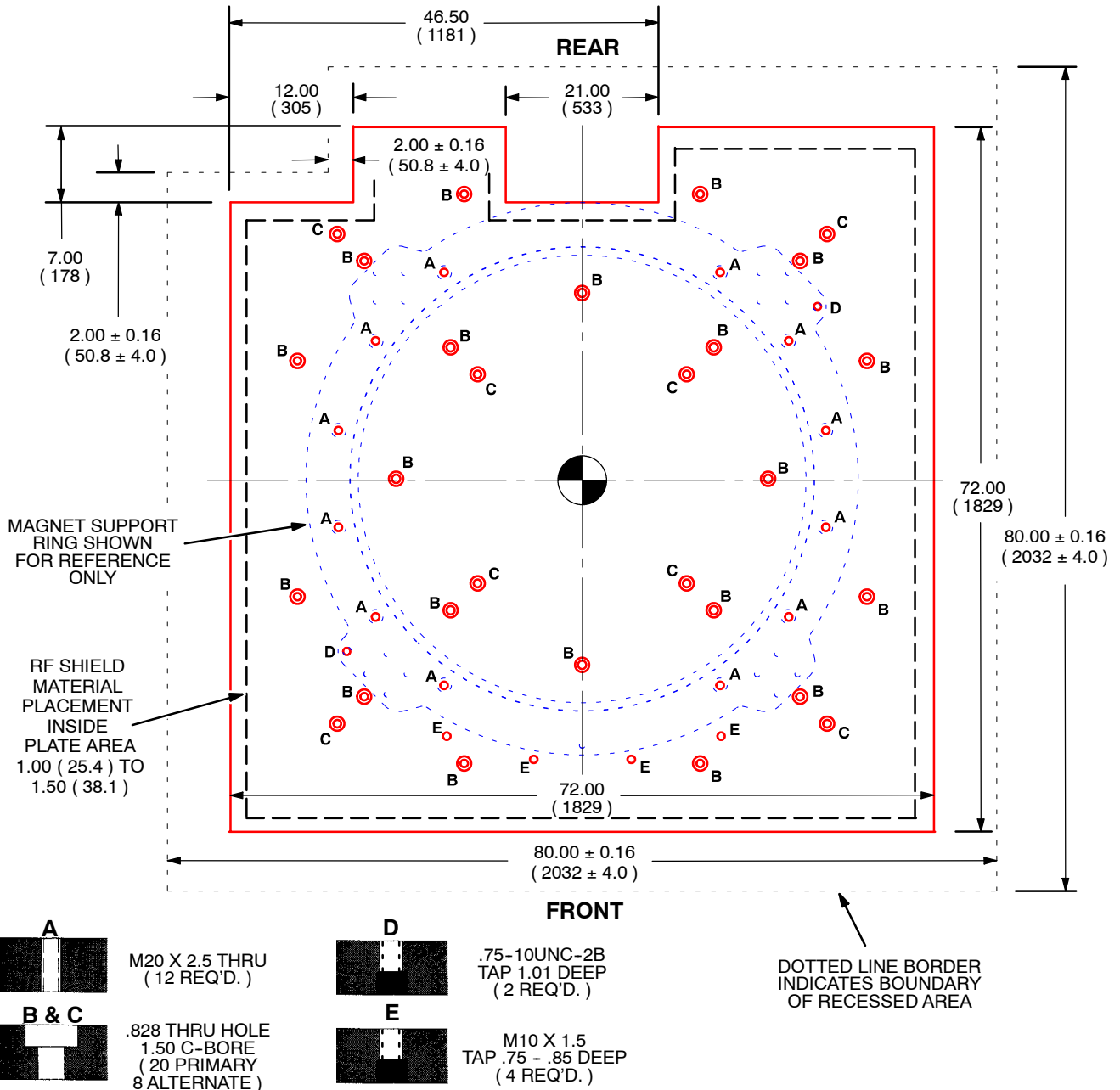
TABLE 3-1
FLOOR RECESS / HEIGHT REQUIREMENTS FOR MAGNET MOUNTING PLATE

Concrete Floor Plate Recess Depth From Top of Concrete to Top of Finished Floor (assumes 0.12 inch [3.0 mm] compressed grout thickness)	Finished Floor Height Above Top of Mounting Plate
2.25 inches ± 0.08 inches (57.1 mm ± 2.0 mm)	0.13 inch ± 0.04 inch (3.2 mm ± 1.0 mm)

3-1 PHYSICAL REQUIREMENTS (continued)

NOTE:

- * ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.
- * APPROXIMATE WEIGHT OF MAGNET MOUNTING PLATE IS 3,100 LBS (1409 KG).
- * MOUNTING HARDWARE AND MATERIALS ARE PROVIDED WITH GE SUPPLIED MAGNET MOUNTING PLATE.
- * MOUNTING PLATE HOLE IDENTIFIERS: **A** = USED TO BOLT MAGNET FLANGE TO MOUNTING PLATE. **B** = PRIMARY HOLES TO ATTACH MOUNTING PLATE TO BUILDING FLOOR. **C** = ALTERNATE HOLES TO ATTACH MOUNTING PLATE TO BUILDING FLOOR. **D** = USED FOR INSERTION OF ALIGNMENT PINS FOR MAGNET LOCATION. **E** = TABLE RAIL MOUNTING HOLES

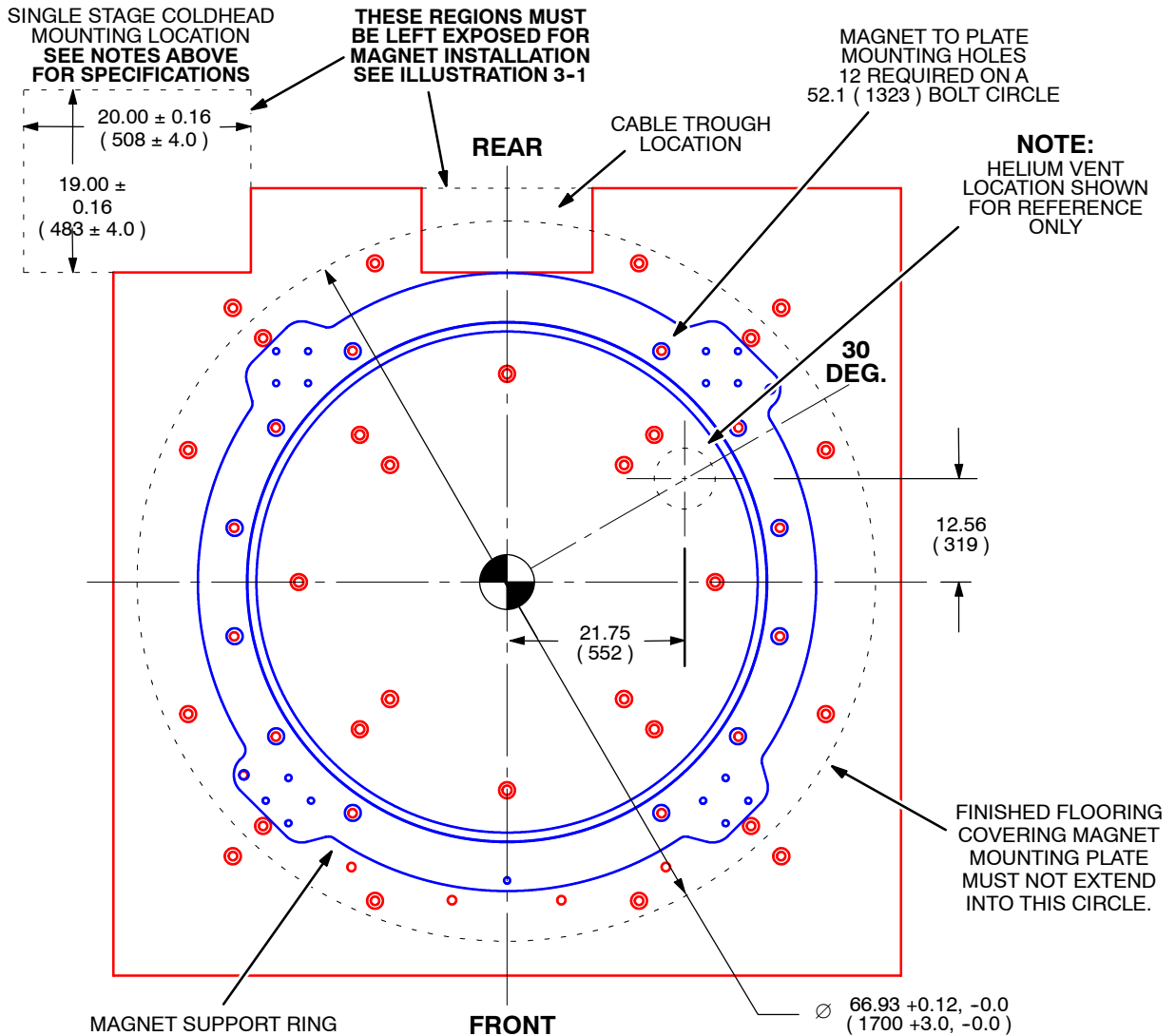


0.7T MAGNET MOUNTING PLATE
ILLUSTRATION 3-1

3-1 PHYSICAL REQUIREMENTS (continued)

NOTE:

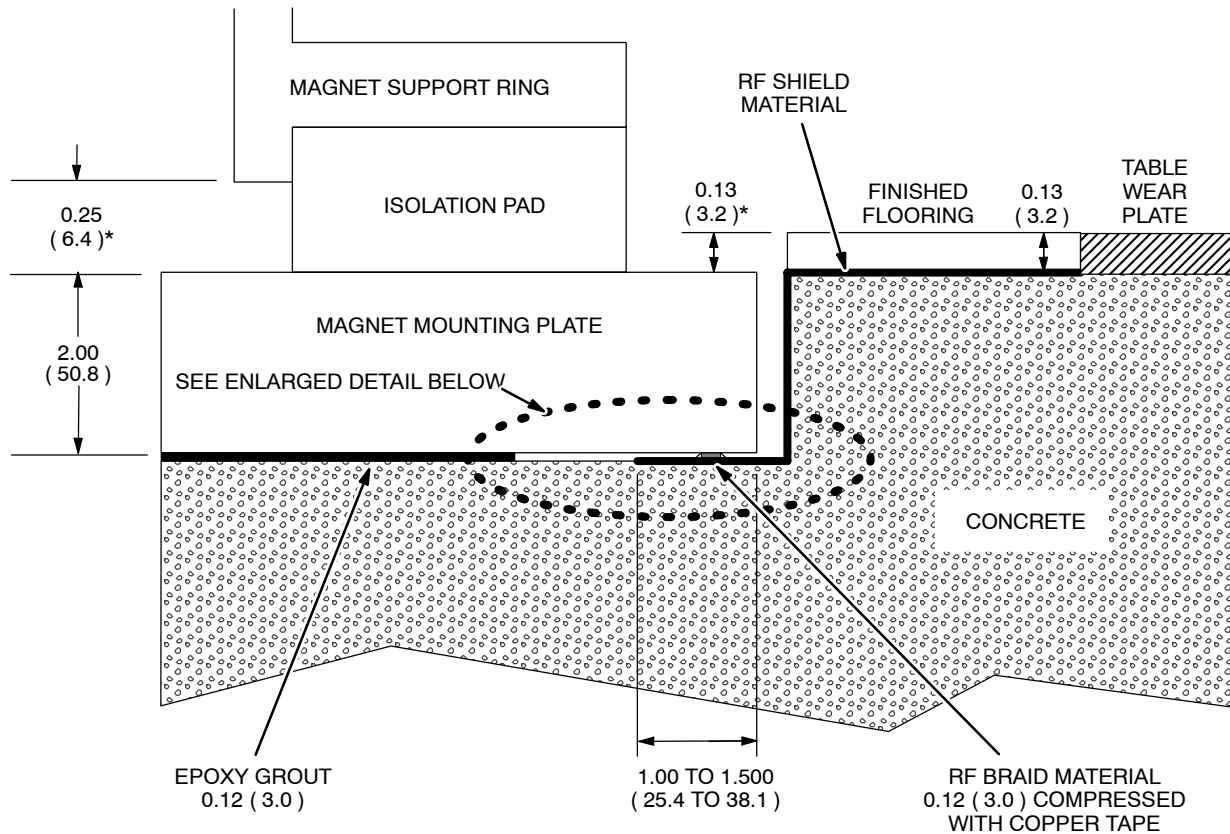
- ALL DIMENSIONS ARE IN INCHES.
- ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.
- **SINGLE STAGE COLDHEAD MOUNTING LOCATION FLOOR AREA MUST MEET FOLLOWING SPECIFICATIONS:**
 - SURFACE AREA TO BE AT SAME HEIGHT (WITHIN ± 0.5 INCHES (12.7 MM)) AND LEVEL (WITHIN 0.08 INCHES (2 MM)) AS MAGNET MOUNTING PLATE OVER THE 20 INCH (508 MM) WIDE BY 19 INCH (483 MM) HIGH REGION SHOWN IN ILLUSTRATION 3-2.
 - AREA TO HAVE MINIMUM 18 INCHES (457 MM) DEPTH OF CONCRETE WHICH IS INTEGRAL WITH THE MAGNET ROOM CONCRETE. THE COLDHEAD MOUNTING AREA SURFACE MUST NOT BE COVERED BY FINISHED FLOOR.
 - NO REBAR OR METAL COMPONENTS ARE ALLOWED BENEATH THE SURFACE OF COLDHEAD MOUNTING AREA.



0.7T MAGNET FINISHED FLOOR REQUIREMENTS FOR MOUNTING PLATE
ILLUSTRATION 3-2

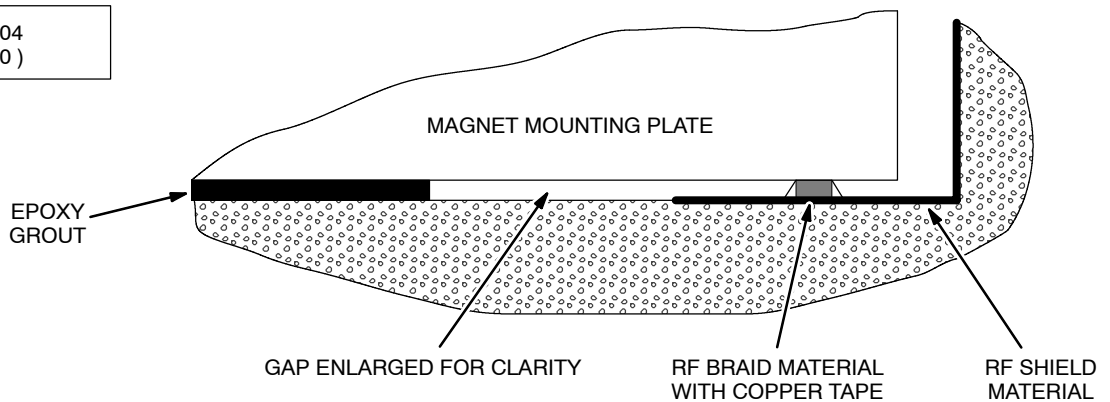
3-1 PHYSICAL REQUIREMENTS (continued)

NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.



* TOLERANCE INFORMATION:

<p>0.25 ± 0.04 (6.4 ± 1.0)</p>



MAGNET MOUNTING PLATE INSTALLATION SIDE VIEW

ILLUSTRATION 3-3

3-2 ELECTRICAL ISOLATION

Magnet Mounting Plate anchor hardware must not provide a secondary ground path for the RF Shield Room. A secondary ground may occur by having the anchor come in contact with steel rebar, wire mesh or structural steel in the floor. Ideally the ground impedance between the anchor and earth ground should be greater than 1000 ohms. This may not be possible due to moisture conditions in the concrete or the soil beneath the concrete. Therefore, the following requirements for ground isolation shall be observed:

1. A ground isolation test must be performed on each electrically conductive anchor and stud.
 - A. If the result is greater than 1000 ohms on each stud, then record the resulting measurement and give documentation to GE Medical Systems Installation Specialist.
 - B. If the result is less than 1000 ohms but greater than 100 ohms, contact the GE Medical Systems Installation Specialist and review process and site conditions.
 - C. If the result is less than 100 ohms, then it is very likely the anchor has made contact to steel rebar or wire mesh. In this case the steel in the floor will need to be removed or the anchors will need to be relocated in an alternate position. In either case, the GE Medical Systems Installation Specialist must be notified and a retest performed after the corrective action is taken.
2. The test results must be recorded by RF Shield Room vendor and the information forwarded to the GE Medical Systems Installation Specialist for the customer's record file.

Electrical Isolation Measurement Method

Prior to attaching the primary ground and installing any power outlets, room lights, water supplies, etc. into the RF Shield Room, a ground isolation test is performed between the room's ground plane and earth ground.

This measurement should be greater than 1000 ohms. Measurement results may appear lower for RF Shield Rooms located below or at grade level. This is caused by a capacitive voltage between the RF Shield Room and earth ground setup by the measuring meter's DC voltage.

For RF Shield Rooms with a resistance reading less than 1000 ohms the following method should be used to determine if the low resistance reading is caused by this capacitive effect:

- Use an analog meter with a D'Arsonval meter movement to make the measurement.
- After making the measurement reverse the leads and watch for the measurement to start high and decrease to a lower resistance value. This change in measurement verifies the capacitive effect.
- In this case the peak measurement is the approximate resistance between the RF Shield Room and earth ground.

Note

For any special case where the Magnet Mounting Plate is isolated from the RF Shield (RF Shield position below concrete) the Magnet Mounting Plate will require grounding to the Magnet.

SECTION 4 - MAGNET MOUNTING PLATE INSTALLATION

IMPORTANT !!!

MAKE SURE INSTALLATION SPECIALIST HAS VERIFIED PLATE LOCATION / ORIENTATION AND FLOOR RECESS / BUILD-UP DIMENSIONS IN THE MAGNET ROOM ARE IN CONFORMANCE WITH REQUIREMENTS IN SECTION 3, MAGNET MOUNTING PLATE REQUIREMENTS.

1. Identify and mark on concrete the magnet's isocenter. Using the isocenter mark, mark Magnet Mounting Plate perimeter location on RF Shield on floor with a black felt-tip pen. Make sure the line is visible.
2. Clean the plate's entire bottom and sides with isopropanol and Scotch-Brite (000 steel wool) pads and dry with lint-free cloth. Clean the RF shield material inside the 1.00 - 1.50 inch (25.4 - 38 mm) perimeter of the mounting plate area with isopropanol and Scotch-Brite (000 steel wool) pads and dry with lint-free cloth.
3. Place copper tape over the "A" holes on bottom surface of plate to insure epoxy grouting does not enter those holes.

Note

Use a 6 foot (2 meter) carpenter level to determine floor level in Step 4.

4. Make sure the floor's mounting surface is free of debris and flat / level within 0.08 inches (2 mm) for entire 80 inch x 80 inch (2032 mm x 2032 mm) area. Correct all non-compliances before continuing with plate mounting.
5. Make sure the RF shield material extends into the mounting plate area 1.00 - 1.50 inches (25.4 - 38.1 mm) around the full perimeter of the plate. Any issues encountered at this step must be resolved before continuing. The RF shield material must be insulated from the concrete.

Note

Lifting eyes, anchor stud assemblies and epoxy grout are supplied with the Magnet Mounting Plate Kit.

6. Install lifting eyes onto the mounting plate at 90 degree increments.



Epoxy curing time is dependent on temperature. Increased temperatures significantly decreases epoxy curing time. Do not store epoxy in a warm place or in direct sunlight.

4 MAGNET MOUNTING PLATE INSTALLATION (continued)

- Place the preformed RF braid material uniformly onto the RF Shield 0.50 inch (12.7 mm) in from edge of Magnet Mounting Plate perimeter. When the braid material is uniformly placed onto the RF Shield, secure the RF braid material to the RF shield material using copper tape at approximately 8 inch (203.2 mm) intervals. See Illustrations 4-1 and 4-2.

IMPORTANT !!!

STEPS 8 THROUGH 10 MUST BE COMPLETED RAPIDLY BEFORE THE EPOXY CURES. EPOXY (UNISORB V-100) HAS A WORKING LIFE OF 45 MINUTES AT 70 DEGREES FAHRENHEIT (21.1 DEGREES CELSIUS). WORKING LIFE DECREASES BY 1 MINUTE FOR EACH 1 DEGREE FAHRENHEIT INCREASE IN AMBIENT TEMPERATURE OVER THE RANGE OF 55 DEGREES FAHRENHEIT TO 85 DEGREES FAHRENHEIT. APPROXIMATE CURING TIME AT 70 DEGREES FAHRENHEIT (21.1 DEGREES CELSIUS) IS 4 TO 5 HOURS. CURING TIME DECREASES WITH INCREASED TEMPERATURE AND INCREASES WITH DECREASED TEMPERATURE.

- Thoroughly mix 1 gallon of epoxy grout with 1 gallon of hardener in a 5 gallon (25 liter) container using a drill with mixing paddles. Save a sample of the mixed epoxy grout to test the cure (hardness) in Step 11.
- Apply the mixed epoxy using ridge-pattern trowel to a thickness of 0.20 - 0.25 inch (5.08 - 6.35 mm) over the full floor surface that will be covered by the plate, except the 4.00 inches (101.6 mm) immediately inside the plate perimeter. Do not apply epoxy grout within 4.00 inches (101.6 mm) of the plate edges. Repeat process in Steps 7 and 8 for second gallon in epoxy grout kit. See Illustrations 4-1 and 4-2.
- Fully thread four lifting eyes into the mounting plate through the "A" holes at 90 degree increments. See Illustration 4-3. Immediately lift and position the Magnet Mounting Plate accurately in its location over the epoxy. Use lifting equipment rated to lift a minimum of 3,500 pounds (1588 kg) to lift and move plate.

Note

Use a 0.75 x 8 inch (19.1 x 203.2 mm) masonry drill to drill the holes in Step 11 to achieve the required hole depth in the concrete. Use the holes marked "B" in the 2 inch (50.8 mm) plate as a guide. The anchors supplied in the kit work in a "bottomless" hole.

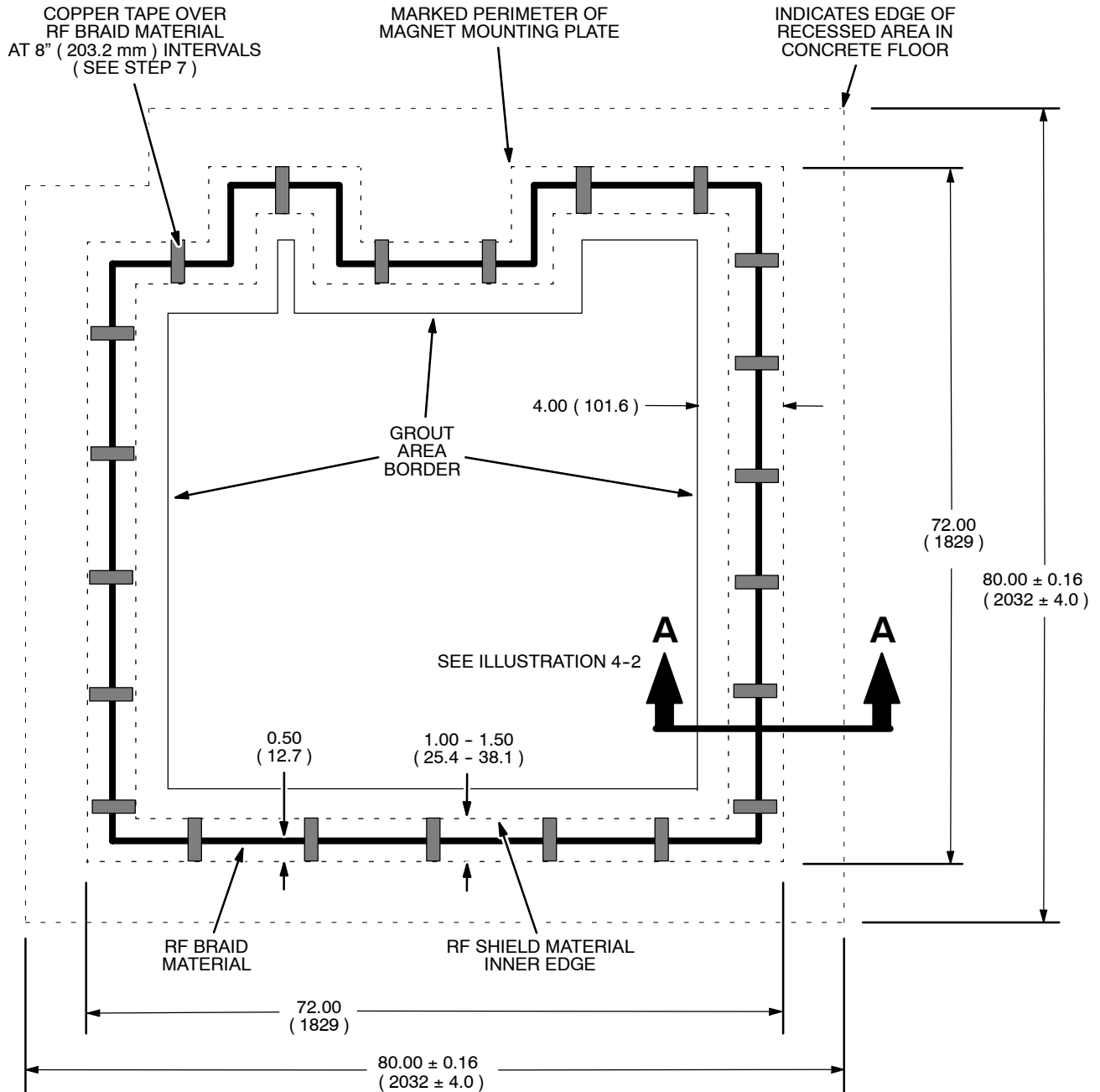
- After the epoxy cures (determined by examining the mixed epoxy grout sample saved in Step 8), drill 0.75 inch (19.1 mm) diameter holes to a minimum depth of 5.50 inches (139.7 mm) into the concrete through the holes marked "B" in the plate. Thoroughly clean out the holes with a vacuum cleaner, compressed air or a blow-out bulb. See Illustration 4-4.

Note

If a problem is encountered that prevents the drilling a hole 5.50 inch (139.7 mm) deep at the "B" position, use the nearest hole marked "C" as an alternate.

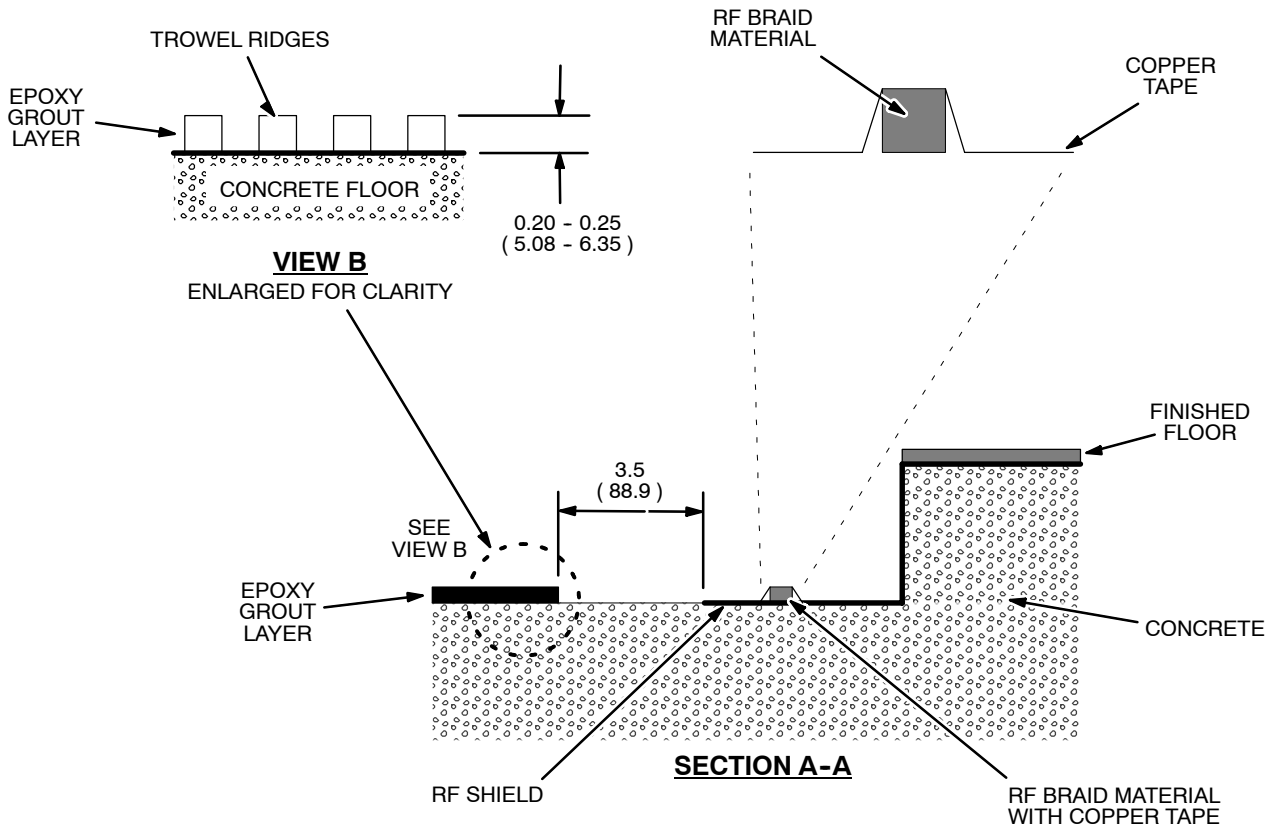
4 MAGNET MOUNTING PLATE INSTALLATION (continued)

NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.



CONCRETE FLOOR PREPARATION FOR MOUNTING PLATE
ILLUSTRATION 4-1

4 MAGNET MOUNTING PLATE INSTALLATION (continued)



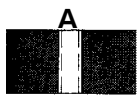
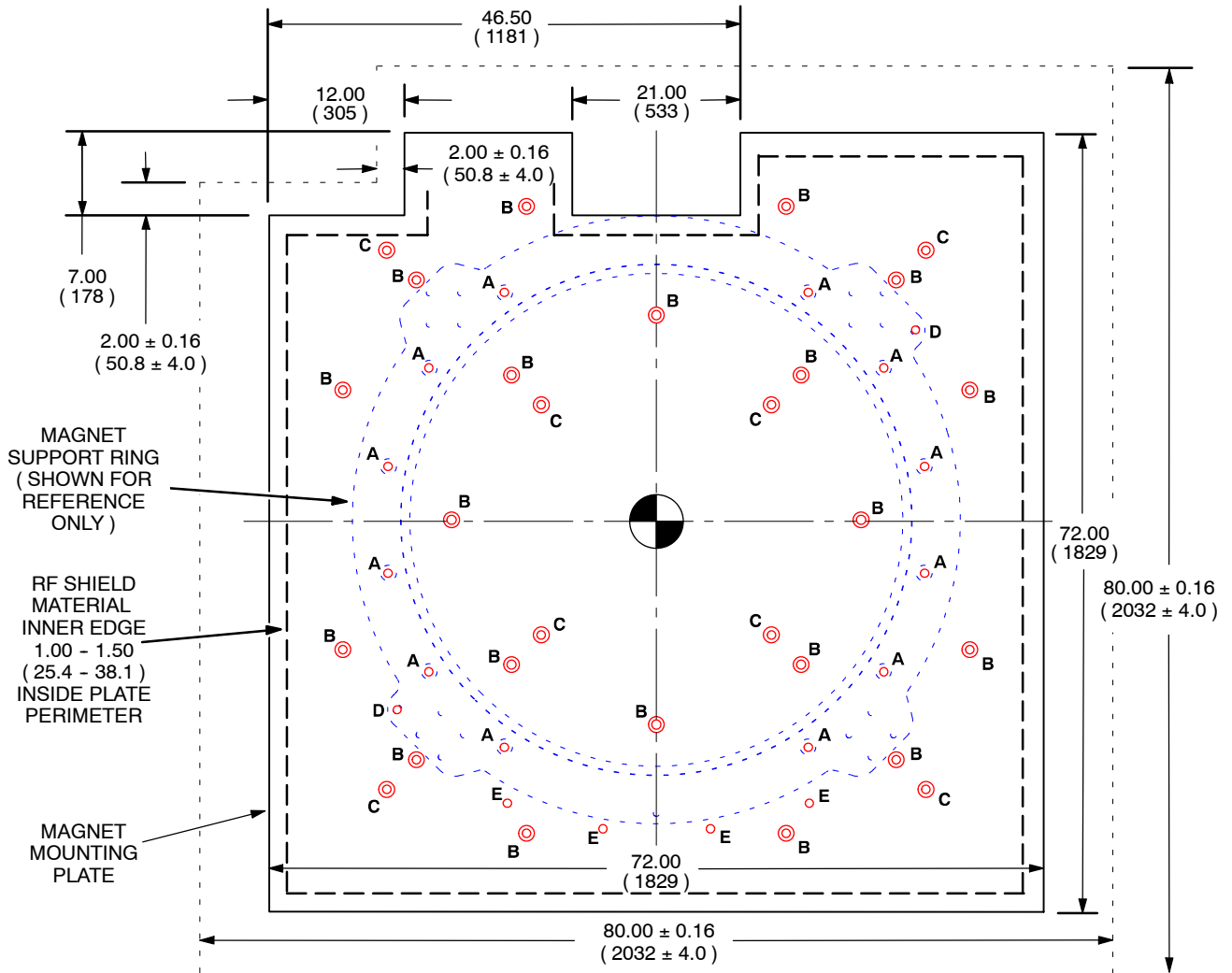
NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.

CONCRETE FLOOR SECTION
ILLUSTRATION 4-2

4 MAGNET MOUNTING PLATE INSTALLATION (continued)

NOTE:

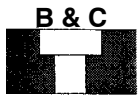
- * ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.
- * APPROXIMATE WEIGHT OF MAGNET MOUNTING PLATE IS 3,100 LBS (1409 KG).
- * MOUNTING HARDWARE AND MATERIALS ARE PROVIDED WITH GE SUPPLIED MAGNET MOUNTING PLATE.
- * MOUNTING PLATE HOLE IDENTIFIERS: **A** = USED TO BOLT MAGNET FLANGE TO MOUNTING PLATE. **B** = PRIMARY HOLES TO ATTACH MOUNTING PLATE TO BUILDING FLOOR. **C** = ALTERNATE HOLES TO ATTACH MOUNTING PLATE TO BUILDING FLOOR. **D** = USED FOR INSERTION OF ALIGNMENT PINS FOR MAGNET LOCATION. **E** = TABLE RAIL MOUNTING HOLES



A
M20 X 2.5 THRU
(12 REQ'D.)



D
.75-10UNC-2B
TAP 1.01 DEEP
(2 REQ'D.)



B & C
.828 THRU HOLE
1.50 C-BORE
(20 PRIMARY
8 ALTERNATE)



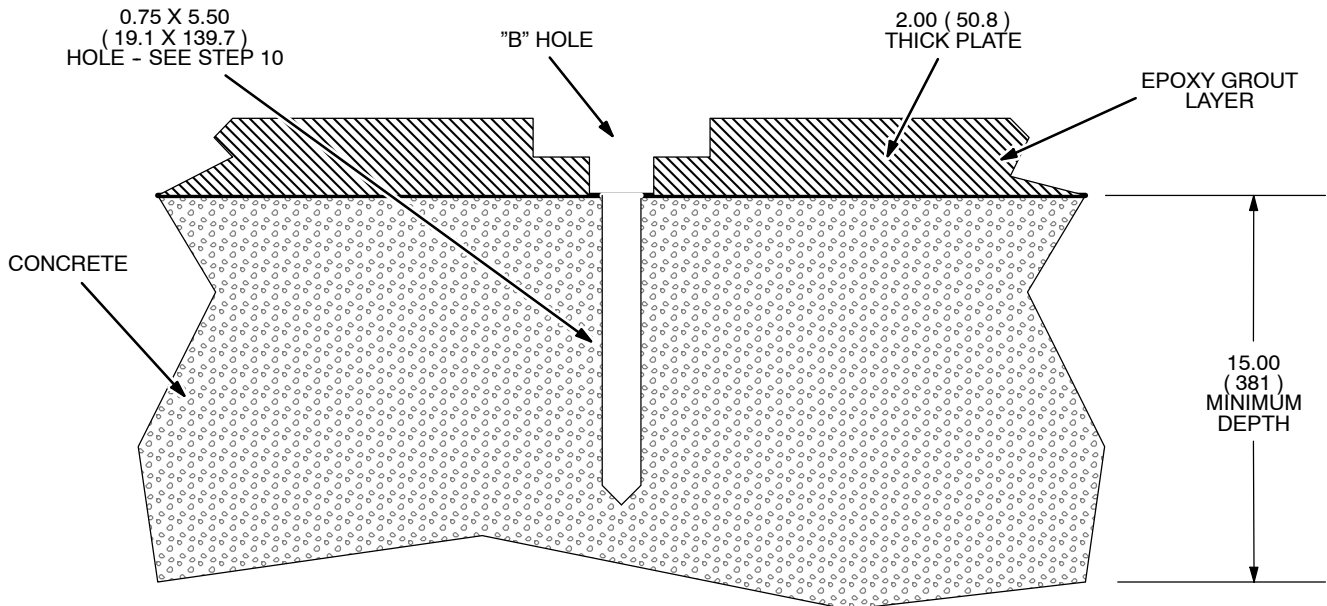
E
M10 X 1.5
TAP .75 - .85 DEEP
(4 REQ'D.)

INDICATES EDGE OF
RECESSED AREA IN
CONCRETE FLOOR

0.7T MAGNET MOUNTING PLATE

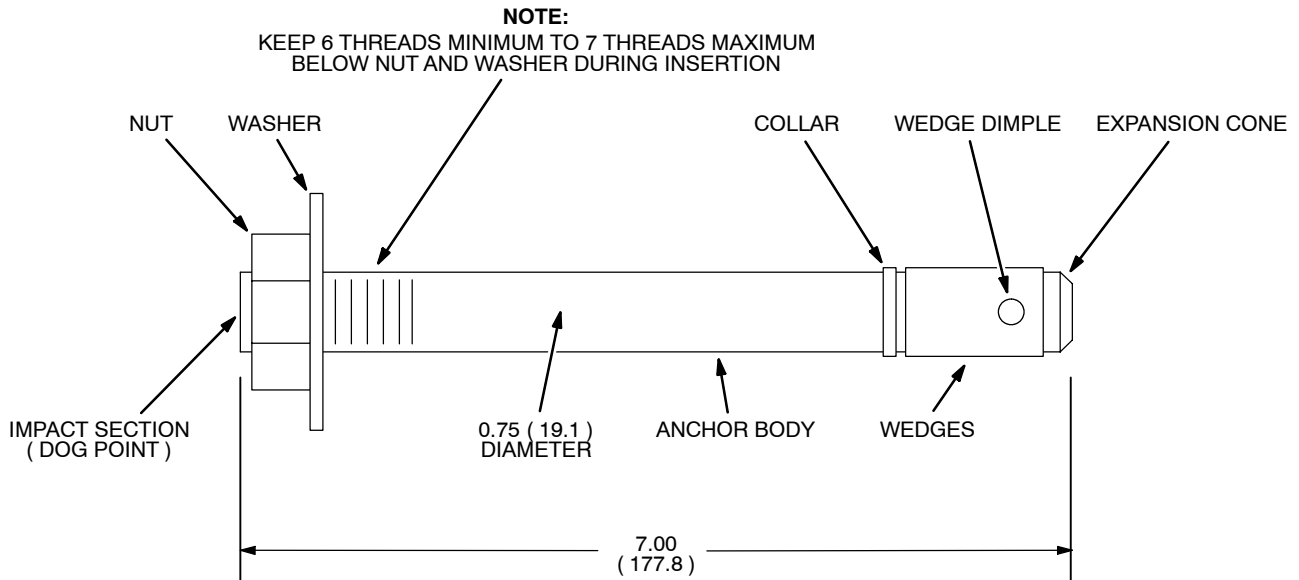
ILLUSTRATION 4-3

4 MAGNET MOUNTING PLATE INSTALLATION (continued)



NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.

PLATE MOUNTING HOLES
ILLUSTRATION 4-4



NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.

ANCHOR STUD
ILLUSTRATION 4-5

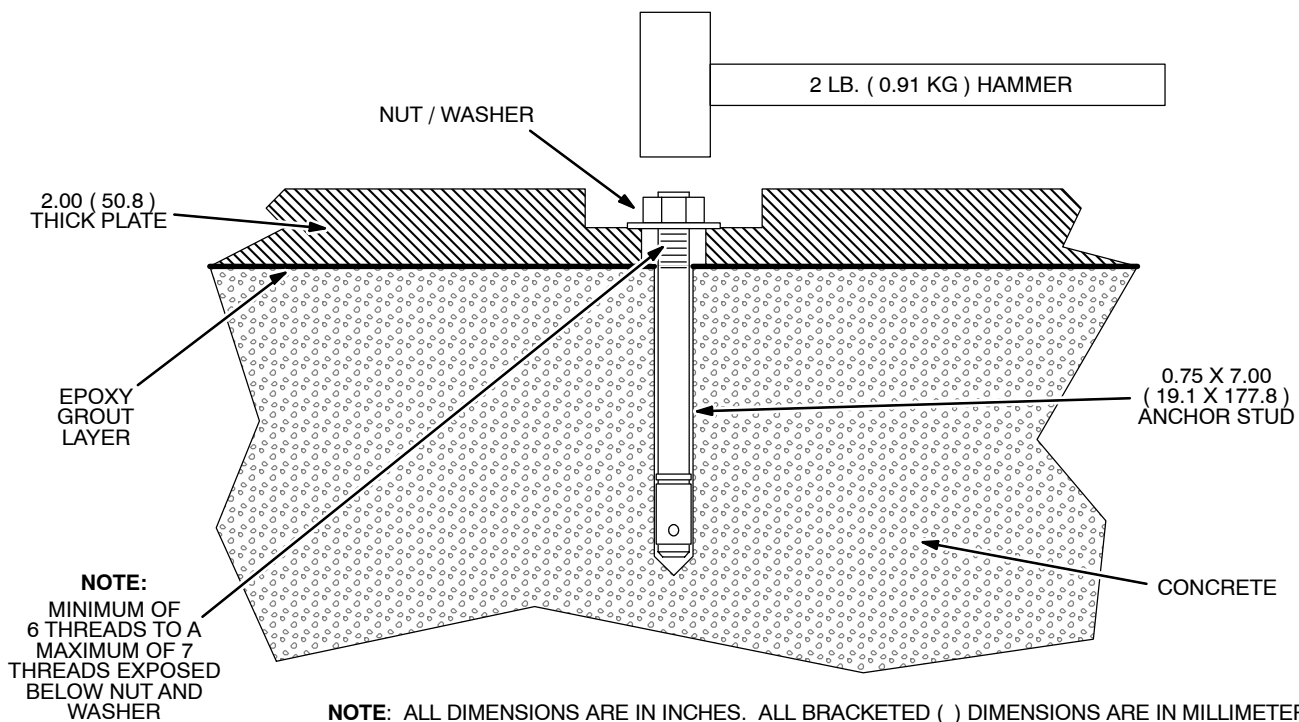
4 MAGNET MOUNTING PLATE INSTALLATION (continued)



Make sure that a nut and washer are fully threaded onto each anchor stud and that 6 threads minimum to 7 threads maximum are exposed below the nut and washer, to allow for setting the wedge into the concrete and torquing, when each anchor stud is inserted in Step 12.

■ Hammer anchor studs carefully to avoid damage to studs.

- 12. Insert a 7 inch (177.8 mm) anchor stud (2267987) into each hole. Do not allow the nut to turn during insertion. Use a 2 pound (0.91 kg) hammer to drive stud into hole until washer and nut make firm contact with bottom of recessed hole "B" in plate. Repeat this process for the 19 remaining anchor studs. See Illustrations 4-5 and 4-6.



NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.

ANCHOR STUD INSERTION
ILLUSTRATION 4-6

4 MAGNET MOUNTING PLATE INSTALLATION (continued)

13. Torque the nut on each anchor stud to the specification value shown in Table 4-1, Torque Requirements.

TABLE 4-1
TORQUE REQUIREMENTS

EQUIPMENT TYPE	TORQUE APPLIED TO EACH ANCHOR ft-lbs (N-M)
0.7T Magnet Mounting Plate (See Note 1)	120 (163) (See Note 2)
<p>Notes:</p> <ol style="list-style-type: none"> 1. The Magnet Mounting Plate must be utilized as the RF Shield under the magnet, and the Magnet Mounting Plate must be rigidly mounted directly to the concrete. 2. Torque requirements are for GE-supplied mounting hardware (i.e., anchors, studs, nuts) and for 2000 psi concrete of a minimum thickness 15.0 inch (381 mm) below mounting plate. 	

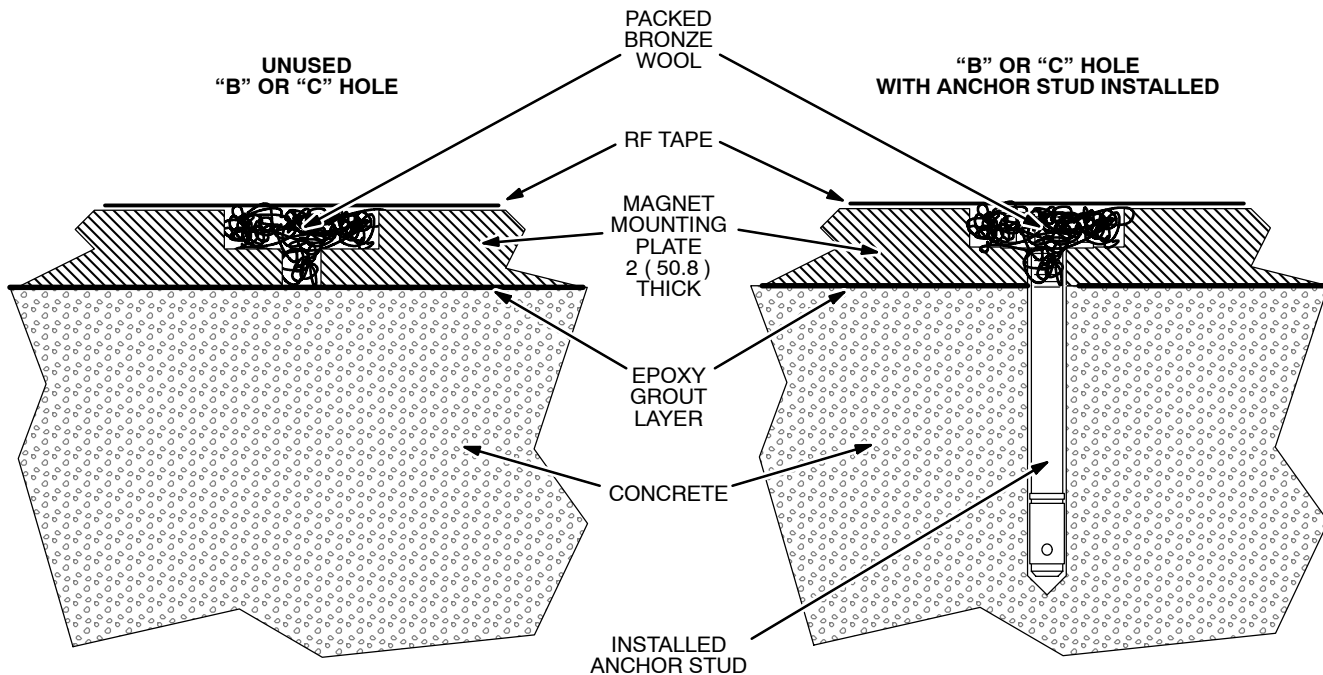
14. Temporarily remove the nut and washer on each anchor stud and perform a ground impedance test according to Section 3-2, Electrical Isolation, while the anchor is not in electrical contact with the mounting plate. Correct non-compliant ground faults. When each anchor is in conformance, reinstall the nut and washer and re-torque to the specification shown in Table 4-1.
15. Grind off any portion of each anchor stud that protrudes above the top of the plate. Clean out all holes in the plate with a vacuum cleaner, compressed air or a blow-out bulb.
16. Verify that the entire Magnet Mounting Plate is flat and level within 0.08 inches (2 mm) over its 72 inch x 72 inch (1829 mm x 1829 mm) surface.

SECTION 5 - RF SHIELDING



Failure to remove all metal filings from holes prior to RF Tape application may result in an image artifact problem when the scanner is in use. Access to these areas after Magnet is installed is virtually impossible.

1. Vacuum and thoroughly clean with isopropanol all holes and adjacent surfaces to be packed with bronze wool and taped in Step 2.
2. Firmly pack bronze wool into all "B" and "C" holes in the Magnet Mounting Plate, with and without anchor studs. Apply RF Tape over all "B" and "C" holes to minimize debris collection and to ensure RF integrity. See Illustration 5-1.



RF SHIELDING OF MOUNTING PLATE
ILLUSTRATION 5-1

3. Apply RF Tape over plate and RF shield material around the full perimeter of the plate. Make sure tape fully adheres to both plate and RF shield material. See Illustration 5-2.
4. Fill in the recessed area surrounding the Magnet Mounting Plate with concrete up to the existing floor's unfinished concrete level.

5 RF SHIELDING (continued)

NOTE: ALL DIMENSIONS ARE IN INCHES. ALL BRACKETED () DIMENSIONS ARE IN MILLIMETERS.

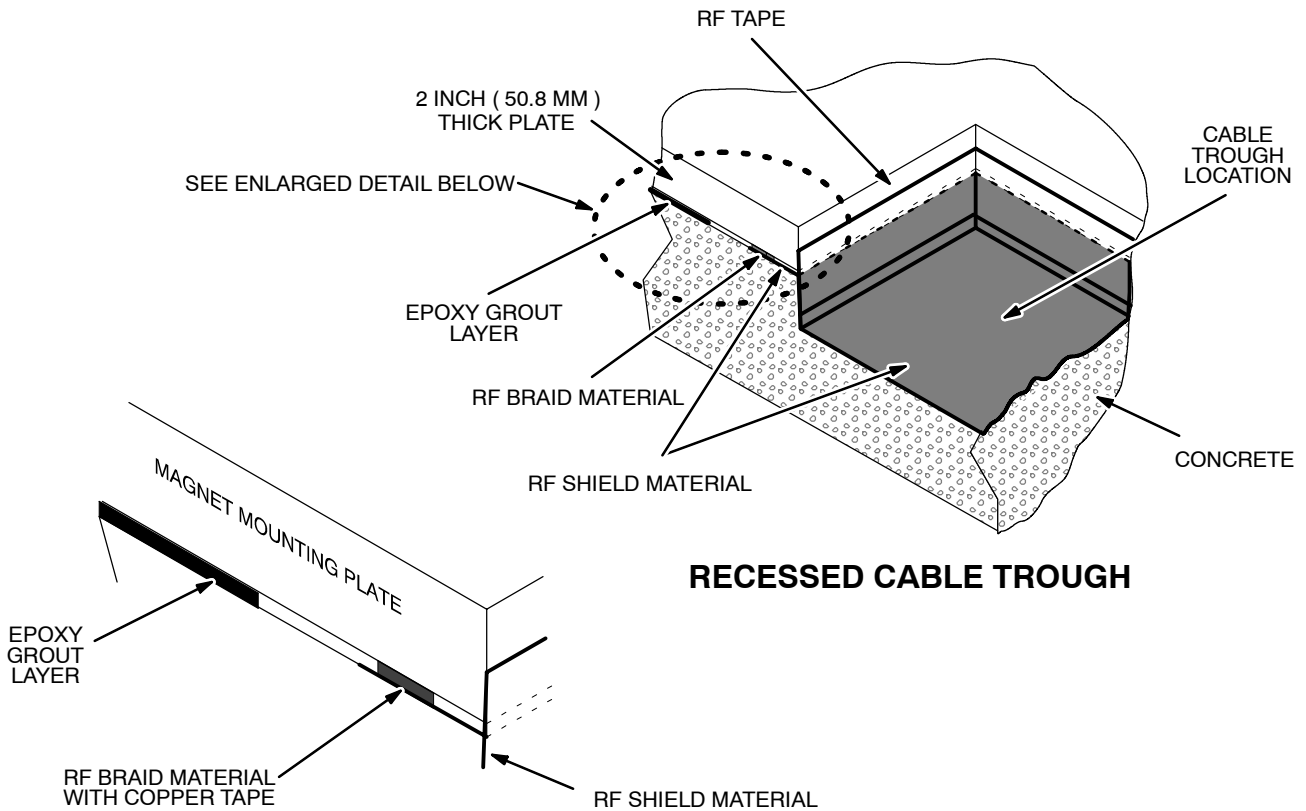
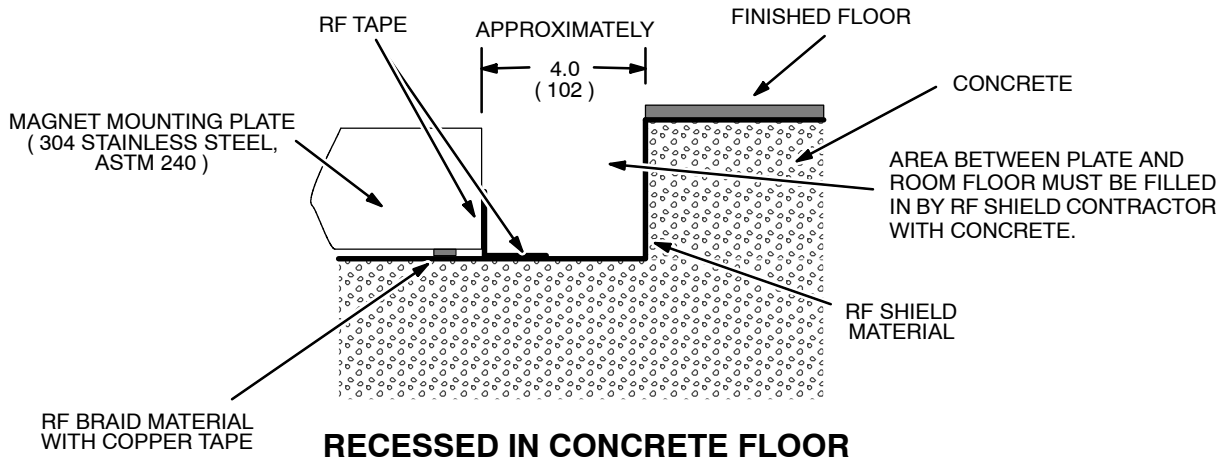
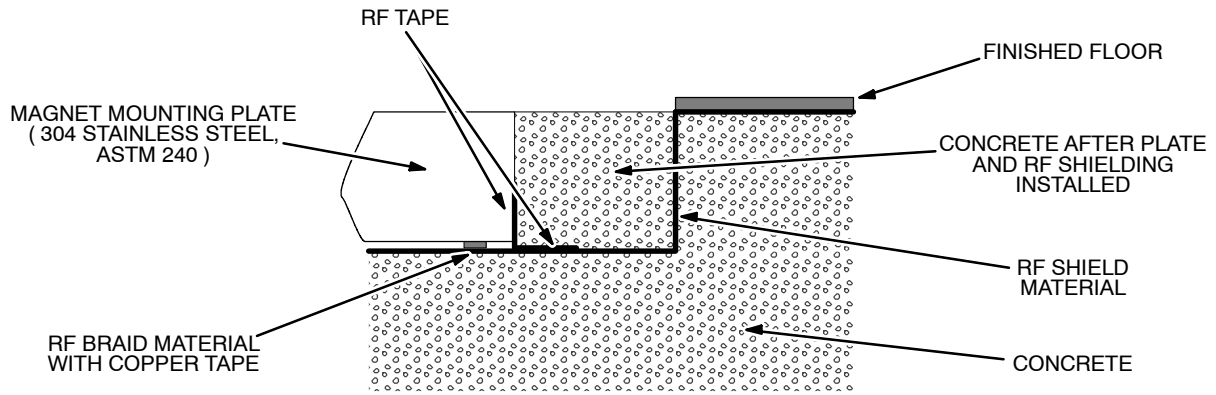


ILLUSTRATION 5-2

5 RF SHIELDING (continued)



GROUT FILL
ILLUSTRATION 5-3

