Date: May 31, 2024

To: Keith Jaburek
GEHC Project Manager - Installations
Ref GE INST: 394731

Regarding: Preliminary shield for a Signa Artist IPM
Location: Jupiter Medical Center in Jupiter, FL

Note: Magnetic shielding decisions must be made by the customer. The following report should help them through this process.

Magnetic Shielding Requested (Design Objectives):
- Contain the 5 gauss

I have these comments/questions:

1) The layout was arranged so that the *unshielded* 5G field is contained to the magnet room except:
   a) West

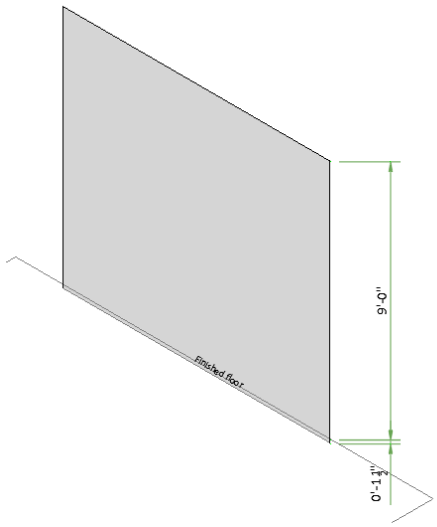
Note: The customer is responsible for restricting access to areas exceeding 5 Gauss, this can be accomplished by providing barriers, warning signs, or other access controls. Magnetic shielding can also be developed to reduce the fields

2) The information provided indicates that the floor-to-floor above spacing is 16'-0".
   a) The *unshielded* 5G field does not enter the floor above.

Preliminary Shield:
We Estimate/ The requested containment can be achieved by using an M36 Silicon Room shield 1/8 in [3mm] thick on

- West wall of the room.

This is an isometric view of the steel:



Date: May 31, 2024

Please review this with the customer and obtain their approval before requesting a Final Shield Design.

Please review this with the customer to ensure they understand this situation.

Note: No FEA model has been run to date. A final shield design will be prepared with GEHCS Finals Drawings for the site. Please review this report with the customer as necessary to make the final determination on containment requirements.

The Customer is responsible for the effect of the fringe fields produced by the System's magnet.

EMI Considerations:

1) For moving metal, the car and truck exclusion lines extend outside the Magnet Room. Please confirm there are no moving metal concerns within these limits.

2) For AC EMI, the plans do not show the location of the main electrical feeders or distribution systems. An EMI study is recommended if moving metal or AC disturbances are suspected.

An EMI study may be required to fully evaluate the DC & AC EMI environment

Other Considerations:

1) For vibration, please confirm that a vibration study has been recommended and/or successfully completed.

2) The magnet must be sited such that its 3G line does not intersect with the 3G line of other magnets. Always check for any other MR systems at your location.

3) No information describing the structural steel below the magnet was provided. The structural engineer must verify that the quantity of steel in the area 10ft x 10ft [3.0m x 3.0m] below the magnet does not exceed the allowable steel content as given in the product's Pre-Installation Manual.

4) Site preparation information is provided in our Final Installation Drawings and the Pre-Installation Manual of the system noted above. Both documents are required to ensure the customer has all the data needed to minimize installation delays due to site readiness issues.

Responsibility for the coordination, design, engineering, and site preparation resides with the customer and their project architects and contractors. GE does not, by providing this review and furnishing comments and assistance, accept any responsibility beyond its obligations as defined in the MR System, Sale/Purchase Agreement.

Regards,

Paul Merchen
MRSS Project Leader
GE Healthcare – Healthcare Project Management

May 15, 2024

Evymel Terron
Avenir Micro Hospital - PBG
1210 S Old Dixie Hwy
Jupiter, FL 33458

Re: Shielding Design for CT Scan Room 1051 at Avenir Micro Hospital - PBG

Dear Evymel Terron,

Enclosed is the recommended shielding design for the above referenced room. Please note the shielding design conditions and assumptions that are attached. Please ensure that copies of these designs are on file at the above referenced facility for review by the State.

Design development is based on NCRP Report #147, ***Structural Shielding Design for Medical X-Ray Imaging Facilities,*** using the methods described in the following applicable Sections:

- CT Scan Rooms: Section 5.6, page 94

Please forward a copy of this letter to the state (if applicable) for their review and approval. Once approval of the plan is granted, the State and/or TJC requires that you have an integrity survey of the room performed by a qualified individual to confirm that the shielding is installed according to the approved design specifications. We are qualified to conduct such surveys and would be glad to schedule the service if you will notify us as to when the shielding installation will be completed.

An initial physics survey must be performed by a qualified individual on each new piece of equipment as required by TJC and AHCA where applicable. For first time registrants, this must be done prior to clinical use of the equipment. Some State Regulations for X-Ray require that new x-ray installations be registered with the State. If this is a new facility and has not previously registered x-ray equipment with the State it will be operated in, it will be necessary that the owner of the equipment execute a registration form and have the following documents on file for State inspection: Shielding Design, Design Approval Letter, Shielding Integrity Survey, and the Initial Physics Survey of the equipment.

I appreciate this opportunity to be of service.

Sincerely yours,

Wayne Benjamin MS DABR
Medical Physicist

Shielding Design Data Sheet

Prepared by

FACILITY NAME: Avenir Micro Hospital - PBG
ADDRESS: 1210 S Old Dixie Hwy, Jupiter FL 33458
CONTACT NAME: Evymel Terron
PHONE NUMBER: 850-554-9190
EMAIL ADDRESS: Evymel.Terron@jupitermed.com
ROOM ID: CT Scan Room 1051
RADIATION GENERATOR: 50 - 600 KeV
WORKLOAD ASSUMED / WEEK: Head Scans - 100 Body Scans - 100
PREPARED BY: Wayne Benjamin MS DABR
REQUEST SUBMITTED: 5/15/2024

LEGEND: **S** = Secondary **P** = Primary **U** = 0.02mGy / week $^{-1}$ **C** = 0.1mGy / week $^{-1}$

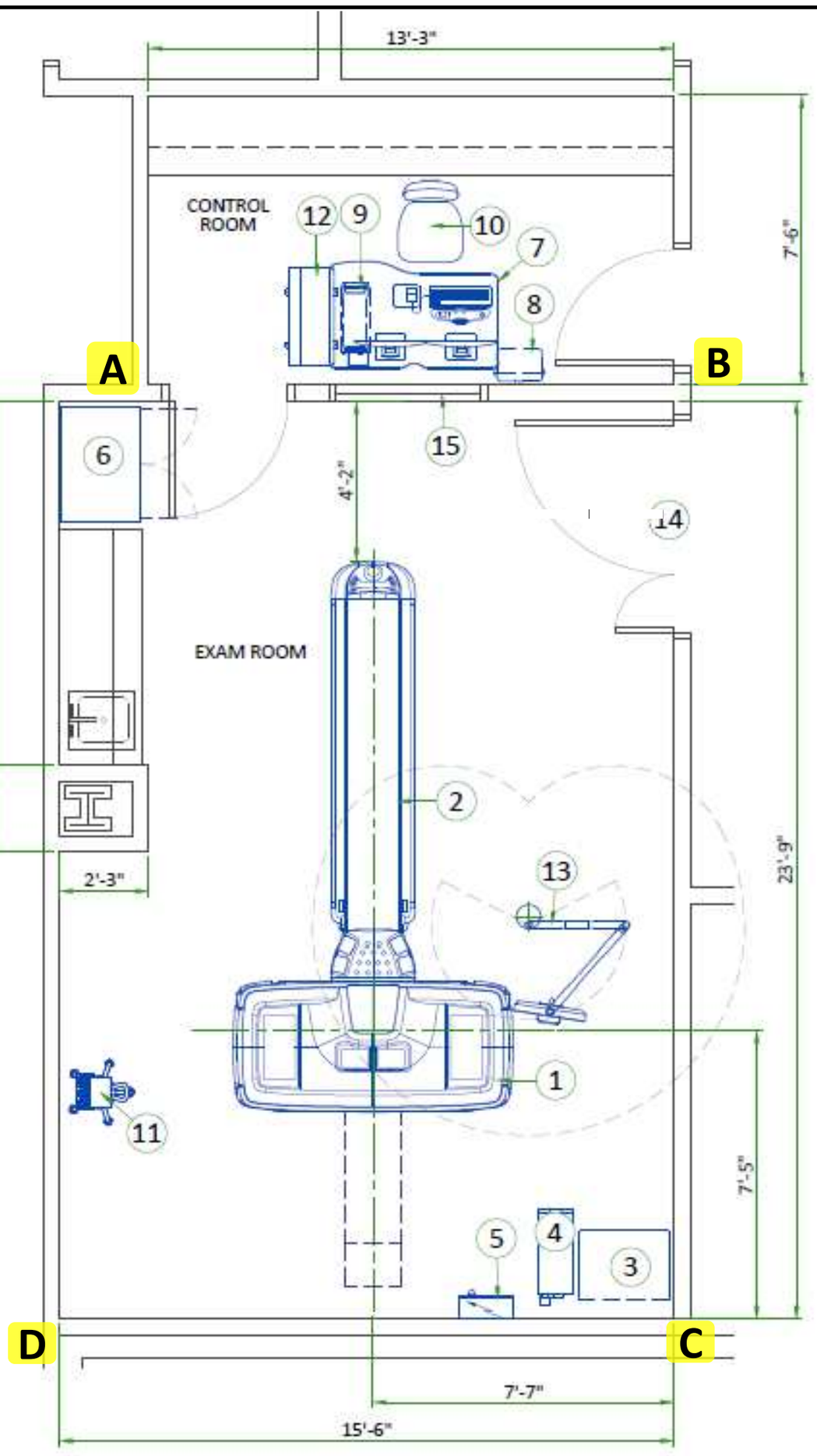
SHIELDING SECTION	AREA BEYOND		TYPE OF BARRIER	Occupancy	DISTANCE (m)	MINIMUM BARRIER THICKNESS (Calculated in mm of Pb)	RECOMMENDED BARRIER THICKNESS	NOTE
	Description	Protection Limit						
Barrier/Window/Door A-B	Control Room	C	S	1	3.7	0.800	1/16 in lead equivalent	
Barrier B-C	Corridor / MRI Equipment Room	U	S	1/2	2.4	1.400	1/16 in lead equivalent	
Barrier C-D	MRI Scan Room	U	S	1/40	2.4	0.300	1/16 in lead equivalent	
Barrier D-A	Corridor	U	S	1/5	2.4	1.100	1/16 in lead equivalent	
Floor	Slab on Grade	-	-	-	-	-	Slab on Grade	
Ceiling	Offices/Exam Rooms	-	-	-	-	-	8 inch Concrete Slab	

The view window (when appropriate) shall contain equivalent protection. The dimensions of the finished viewing area of the view window shall not be less than 12 inches by 12 inches. The edge of the operator barrier must extend at least 18 inches from the edge of the view window or 30 inches from the center of a view window with a minimum horizontal dimension of 24 inches. Furthermore, a standard view window with dimensions of 24 inches by 24 inches or less, should be installed such that the base of the window is at least 4.5 feet above the finished floor.

Wayne Benjamin MS DABR
Medical Physicist

Shielding Design Layout

FACILITY NAME:	Avenir Micro Hospital - PBG	**ADDRESS:**	1210 S Old Dixie Hwy, Jupiter FL
CONTACT NAME:	Evymel Terron	**PHONE NUMBER:**	850-554-9190
		EMAIL ADDRESS:	Evymel.Terron@jupitermed.com
ROOM ID:	CT Scan Room 1051	**RADIATION GENERATOR:**	50 - 600 KeV
PREPARED BY:	Wayne Benjamin MS DABR	**DATE SUBMITTED:**	5/15/2024



Wayne Benjamin MS DABR
Medical Physicist

May 15, 2024

Evymel Terron
Avenir Micro Hospital - PBG
1210 S Old Dixie Hwy
Jupiter, FL 33458

Re: Shielding Design for R/F Room 1065 at Avenir Micro Hospital - PBG

Dear Evymel Terron,

Enclosed is the recommended shielding design for the above referenced room. Please note the shielding design conditions and assumptions that are attached. Please ensure that copies of these designs are on file at the above referenced facility for review by the State.

Design development is based on NCRP Report #147, ***Structural Shielding Design for Medical X-Ray Imaging Facilities,*** using the methods described in the following applicable Sections:

- Radiographic and Fluoroscopic Rooms: Section 4.2.4, page 51

Please forward a copy of this letter to the state (if applicable) for their review and approval. Once approval of the plan is granted, the State and/or TJC requires that you have an integrity survey of the room performed by a qualified individual to confirm that the shielding is installed according to the approved design specifications. We are qualified to conduct such surveys and would be glad to schedule the service if you will notify us as to when the shielding installation will be completed.

An initial physics survey must be performed by a qualified individual on each new piece of equipment as required by TJC and AHCA where applicable. For first time registrants, this must be done prior to clinical use of the equipment. Some State Regulations for X-Ray require that new x-ray installations be registered with the State. If this is a new facility and has not previously registered x-ray equipment with the State it will be operated in, it will be necessary that the owner of the equipment execute a registration form and have the following documents on file for State inspection: Shielding Design, Design Approval Letter, Shielding Integrity Survey, and the Initial Physics Survey of the equipment.

I appreciate this opportunity to be of service.

Sincerely yours,

Wayne Benjamin MS DABR
Medical Physicist

Shielding Design Data Sheet

Prepared by

	Avenir Micro Hospital - PBG	**ADDRESS:**	1210 S Old Dixie Hwy, Jupiter FL 33458
CONTACT NAME:	Evymel Terron	**PHONE NUMBER:**	850-554-9190
		EMAIL ADDRESS:	Evymel.Terron@jupitermed.com
ROOM ID:	R/F Room 1065	**RADIATION GENERATOR:**	50 - 600 KeV
WORKLOAD ASSUMED / WEEK:	Xray - 100 Fluoroscopy - 50		
PREPARED BY:	Wayne Benjamin MS DABR	**REQUEST SUBMITTED:**	5/15/2024

LEGEND: **S** = Secondary **P** = Primary **U** = 0.02mGy / week $^{-1}$ **C** = 0.1mGy / week $^{-1}$

SHIELDING SECTION	AREA BEYOND		TYPE OF BARRIER	Occupancy	DISTANCE (m)	MINIMUM BARRIER THICKNESS (Calculated in mm of Pb)	RECOMMENDED BARRIER THICKNESS	NOTE
	Description	Protection Limit						
Barrier/Window/ A-J	Control Booth	C	S	1	1.8	0.900	1/16 in lead equivalent	
Barrier/Door I-H-G	Equipment / Corridor	U	S	1/5	3.0	0.600	1/16 in lead equivalent	
Barrier/Door G-F	Patient Toilet	U	S	1/5	3.0	0.600	1/16 in lead equivalent	
Barrier F-E-D-C	Lab / Electrical . Med Gas	U	S	1/2	2.4	1.000	1/16 in lead equivalent	
Barrier/Window C-B	Exterior	U	S	1/40	1.2	0.500	No Additional Shielding Required	
Barrier B-A	Toilet / MRI Waiting Rom	-	-	1/2	2.4	1.000	1/16 in lead equivalent	
Floor	Slab on Grade	-	-	-	-			
Ceiling	Roof/Patiemt Rooms	-	-	-	-			

The view window (when appropriate) shall contain equivalent protection. The dimensions of the finished viewing area of the view window shall not be less than 12 inches by 12 inches. The edge of the operator barrier must extend at least 18 inches from the edge of the view window or 30 inches from the center of a view window with a minimum horizontal dimension of 24 inches. Furthermore, a standard view window with dimensions of 24 inches by 24 inches or less, should be installed such that the base of the window is at least 4.5 feet above the finished floor.

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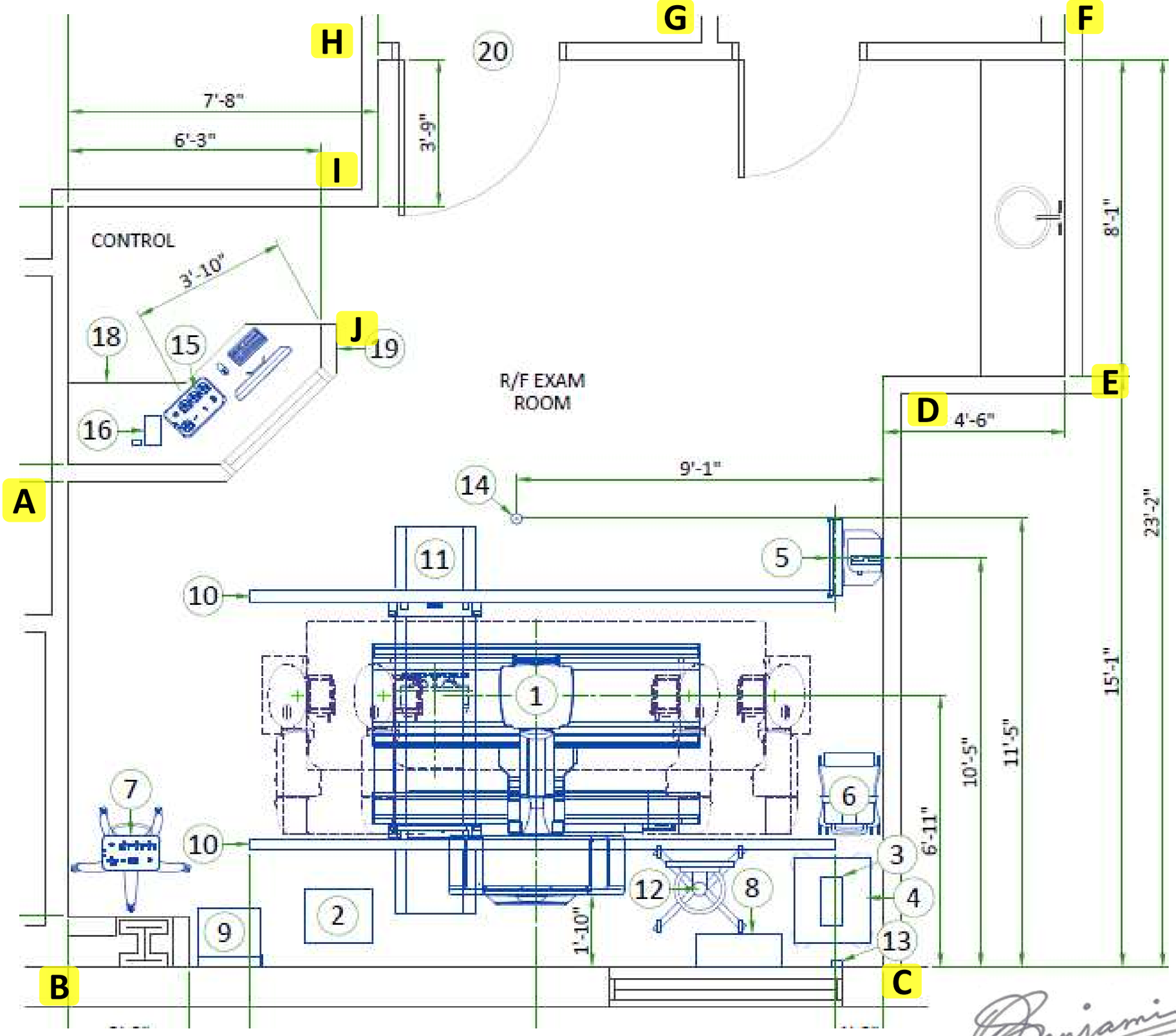
Medical Physicist

Shielding Design Layout

FACILITY NAME:	Avenir Micro Hospital - PBG	**ADDRESS:**	1210 S Old Dixie Hwy, Jupiter FL
CONTACT NAME:	Evymel Terron	**PHONE NUMBER:**	850-554-9190
		EMAIL ADDRESS:	Evymel.Terron@jupitermed.com
ROOM ID:	R/F Room 1065	**RADIATION GENERATOR:**	50 - 600 KeV
PREPARED BY:	Wayne Benjamin MS DABR	**DATE SUBMITTED:**	5/15/2024



Wayne Benjamin MS DABR
Medical Physicist