


RFI FORM**Contractor Name: EARTHTEK Builders Inc.****Address: 2588 Woodbury Drive, Torrance CA 90503****Phone/Fax: (310) 720-4338 / (310) 564-0189****Send to: cecil.nichols@va.gov**

RFI (REQUEST FOR INFORMATION)			
PROJECT NO.:	600-CSI-101	RFI NO.:	002 clarification
PROJECT NAME:	MRI Renovation & Expansion	DATE REQUESTED:	04/25/2017
SOLICITATION NO.:	VA262-17-B-0095	REFERENCE:	
DRAWING:	AE602 Equipment Schedule	SPECIFICATION SECTION:	
DESCRIPTION OF PROBLEM OR INFORMATION BEING REQUESTED			
<p>Please be specific as possible: Equipment Schedule issued through Amendment No. A00003 has EQ65 Manual Cryogen Compressor Water in column CFCI while GE emailed that "GE provides EQ62, EQ64, EQ65, and EQ69 under a separate contract with the VA. You will need to include installation of these items in your proposal". Please advise whether EQ65 Manual Cryogen Compressor Water is CFCI or GFCI.</p>			
PROJECT MANAGER'S RESPONSE			
<p>KAL Response 4/28/17: Refer to attached sheet A1. Items listed in the table at the top right of the sheet are to be furnished and installed by the contractor. EQ65 Manual Cryogen Compressor Water is listed in this table as #90. It is available for purchase from GE and it is to be CFCI.</p>			
TRACKING NO.:		AMENDMENT NO.:	
VA PROJECT ENGINEER/MANAGER: 		DATE: 05/05/2017	

GE EQUIPMENT LISTING							EQUIPMENT CROSS REFERENCE CHART	
EQUIPMENT ON ORDER FROM GE HEALTHCARE, INSTALLED BY GE HEALTHCARE, PER QUOTE PR7-C51402 V4 DATED 28.Apr.16							P = PREAPPROVAL C = CALCULATIONS/ PENDING APPROVAL S = SPECIFICATIONS ONLY	
NOTE: LOCAL CONDITIONS MAY DICTATE THAT ITEMS IDENTIFIED IN THIS CATEGORY BE INSTALLED BY OTHERS.							SEISMIC STATUS	
ITEM NO.	QUANTITY ORDERED	REFER TO SHEET "D"	ITEM DESCRIPTION (* = EXISTING/REINSTALL)	WEIGHT	HEAT OUTPUT (PER HOUR)	DETAIL NO.	STRC PLAN	ELEC PLAN
(1)	1		SPT PHANTOM CABINET	350 lbs		M6115	-	
(2)	1		3.0 TESLA ACTIVE SHIELD MAGNET	16922 lbs	8191 btu	M3015K M3015L M3030G M3035G	-	MAG
(3)	1		REAR PEDESTAL	213 lbs			-	
(4)	1		PATIENT TRANSPORT TABLE <DDCS NOT INCLUDE PATIENT>	462 lbs		M33006	O	
(5)	1		MAGNET RUNDOWN UNIT	8 lbs		M1715C	-	MRU
(6)	1		SHIELD COOLER CABINET	264 lbs	1706 btu	M33004	-	CRY
(7)	1		POWER, GRADIENT, RF CABINET	3143 lbs	20945 btu	M3015G	-	PGR
(8)	1		PEN PANEL CABINET <EXAM ROOM SIDE>	639 lbs	10629 btu 1023	M3015F	-	PEN
(9)	1		RF PENETRATION PANEL	92 lbs		M3015P	-	SPW
(10)	1		BLOWER BOX		1535 btu	M3015J	-	
(11)	1		HEAT EXCHANGER CABINET	1349 lbs	3412 btu	M3015B M3015D	-	HEC
(12)	1		MAGNET MONITOR	11 lbs	819 btu	M1615C	-	MDN
(13)	1		OPERATOR WORKSPACE W/COLOR LCD MONITOR	26 lbs	4948 btu	M3015D	-	OW
(14)	1		OPERATOR WORKSPACE CABINET	141 lbs		M0615E	-	
(15)	1		PATIENT ALERT CONTROL BOX			M4815	-	PA
(16)	1		OPERATOR'S CHAIR				-	
(17)	1		INJECTOR HEAD ON PEDESTAL	59 lbs		E8804S1	O	IH
(18)	1		CONTROL ROOM UNIT	15 lbs		E8804S	O	ICU
(19)	1		INTEGRATED CONTINUOUS BATTERY CHARGER	4 lbs			O	ICBC
(20)	1		MR MUSIC SYSTEM INCLUDING SPEAKERS, REMOTE CONTROL AND TRANSDUCER	44 lbs			-	MU
(21)	1		PARTIAL SYSTEM UNINTERRUPTIBLE POWER SUPPLY	26 lbs			-	UPS

50	1	MAIN DISCONNECT PANEL	130 lbs	901 ktu	M1715E	-	MDP	C
51	1	WATER FILTER				-		
52	1	REMOTE GRAPHIC DISPLAY				-	RGD	S
53	1	DIMPLEX 7500 CHILLER	4301 lbs	240002 ktu	M0300F	-	DMP	L

SCALE: 1/4" = 1'-0" EQUIPMENT LAYOUT CEILING HEIGHT = 8'-9"

This equipment layout indicates the placement and interconnection of the indicated equipment components. There may be federal, state, and/or local requirements that could impact the placement of these components. It remains the Customer's responsibility for ensuring the site and final equipment placement complies with all applicable federal, state, and/or local requirements.

MRI SITE PLANNING REMINDERS

PLEASE REFER TO PRE-INSTALLATION CHECKLIST IN PRE-INSTALLATION MANUAL LISTED ON SHEET C1 FOR ITEMS CRITICAL TO IMAGE QUALITY.

- THE LAYOUT SHOULD BE ARRANGED SO THAT THE 5G LINE IS CONTAINED TO THE MAGNET ROOM. IF NOT POSSIBLE, A BARRIER IS RECOMMENDED TO PREVENT ENTRY TO THE 5G FIELD AREA.
- THE SPACES AROUND, ABOVE, AND BELOW THE MAGNET MUST BE REVIEWED FOR EFFECTS OF THE 5G, 3G, 1G, AND .5G FIELDS. REFER TO THE PROXIMITY LIMIT CHART IN THE MR PRE-INSTALLATION MANUAL REFERENCED ON C1.
- FOR MOVING METAL, THE RESTRICTION LINES TYPICALLY EXTEND OUTSIDE OF THE MRI SPACE. PLEASE CONFIRM THERE ARE NO MOVING METAL CONCERNS WITHIN THESE AREAS. AN EMI STUDY IS RECOMMENDED IF THE RESTRICTION LINES ARE VIOLATED.
- FOR VIBRATION, ANALYSIS TO BE COMPLETED AS REQUIRED PER PRE-INSTALLATION MANUAL.
- FOR EMI, REVIEW THE SITE FOR THE LOCATION OF THE MAIN ELECTRICAL FEEDERS, AC DEVICES, OR DISTRIBUTION SYSTEMS. AN EMI STUDY IS RECOMMENDED IF LARGE AC SYSTEMS ARE NEARBY.
- DETAILS OF THE FLOOR BELOW THE MAGNET MUST BE REVIEWED. THE STRUCTURAL ENGINEER MUST VERIFY THAT THE QUANTITY OF STEEL IN THE VOLUME 10FT [3.1M] X 10FT [3.1M] X 1FT [3M] DEEP (BELOW THE MAGNET) DOES NOT EXCEED THE ALLOWABLE STEEL CONTENT AS GIVEN IN THE MR PRE-INSTALLATION MANUAL REFERENCED ON SHEET C1.

RESPONSIBILITY FOR THE COORDINATION, DESIGN, ENGINEERING, AND SITE PREPARATION RESIDES WITH THE CUSTOMER AND THEIR PROJECT ARCHITECTS AND CONTRACTORS. GE DOES NOT, BY PROVIDING REVIEWS AND FURNISHING COMMENTS AND ASSISTANCE, ACCEPT ANY RESPONSIBILITY BEYOND ITS OBLIGATIONS AS DEFINED IN THE MR SYSTEM, SALE/PURCHASE AGREEMENT.

IMAGE QUALITY CONSIDERATIONS

BROADBAND RF NOISE IS A SINGLE TRANSIENT OR CONTINUOUS SERIES OF TRANSIENT DISTURBANCES CAUSED BY AN ELECTRICAL DISCHARGE. LOW HUMIDITY ENVIRONMENTAL CONDITIONS WILL HAVE HIGHER PROBABILITY OF ELECTRICAL DISCHARGE. THE ELECTRICAL DISCHARGE CAN OCCUR DUE TO ELECTRICAL ARcing (MICRO ARcing) OR MERELY STATIC DISCHARGE. SOME POTENTIAL SOURCES CAPABLE OF PRODUCING ELECTRICAL DISCHARGE INCLUDE:

- LOOSE HARDWARE/FASTENERS VIBRATION OR MOVEMENT (ELECTRICAL CONTINUITY MUST ALWAYS BE MAINTAINED)
- FLOORING MATERIAL INCLUDING RAISED ACCESS FLOORING (PANELS & SUPPORT HARDWARE) AND CARPETING
- ELECTRICAL FIXTURES (i.e. LIGHTING FIXTURES, TRACK LIGHTING, EMERGENCY LIGHTING, BATTERY CHARGERS, OUTLETS)
- DUCTING FOR HVAC AND CABLE ROUTING
- RF SHIELD SEALS (WALLS, DOORS, WINDOWS ETC.)

FOR ADDITIONAL INFORMATION REGARDING IMAGE QUALITY, REFER TO THE PRE-INSTALLATION MANUAL LISTED ON SHEET C1.

NOTE: VERIFY DELIVERY ROUTE FOR MAGNET, EQUIPMENT, AND SERVICE EQUIPMENT PRIOR TO DELIVERY.

CRITICAL ITEMS FOR MAGNET DELIVERY

- ☐ 24/7 CHILLED WATER AND 480V POWER FOR SHIELD/CRYO COOLER
- ☐ 24/7 120V POWER FOR THE MAGNET MONITOR
- ☐ PHONE LINES FOR MAGNET MONITORING AND EMERGENCY USE
- ☐ MAGNET ROOM EXHAUST FAN
- ☐ CRYOGEN VENTING (IF ROOF HATCH, COMPLETED WITHIN 24 HRS)
- ☐ MAGNET ANCHORS INSTALLED AND TESTED

THIS IS ONLY A PARTIAL LIST OF ITEMS REQUIRED FOR DELIVERY OF THE MAGNET. FOR A COMPLETE CHECKLIST REFER TO THE PRE-INSTALLATION MANUAL REFERENCED ON SHEET C1.

* THE ISOGAUSS CONTOUR PLOTS DEPICTED ON THIS DRAWING REPRESENT MAGNETIC FRINGE FIELDS RESULTING FROM THE NORMAL OPERATION OF THE MAGNET PROVIDED WITH THE MR SYSTEM. THE ACTUAL MAGNETIC FIELD INTENSITY AT ANY POINT IN THE VICINITY OF THE MAGNET WHEN INSTALLED MAY VARY FROM THE CONTOUR PLOTS DUE TO FACTORS SUCH AS THE CONCENTRATING EFFECTS OF NEARBY FERROUS OBJECTS AMBIENT MAGNETIC FIELDS, INCLUDING THE EARTH'S MAGNETIC FIELD. THEREFORE, THE CONTOURS SHOWN ARE ONLY APPROXIMATIONS OF ACTUAL FIELD INTENSITIES FOUND AT A CORRESPONDING DISTANCE FROM THE MAGNET'S ISOCENTER.

The diagram illustrates the layout of an MRI suite. The central feature is the **MAGNET ROOM**, which contains the main magnet assembly (labeled 2) and associated components like the cryostat (1), helium tank (3), and various support systems (4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71). The **EQUIP. ROOM** is located to the left of the magnet room, and the **CONTROL ROOM** is to the right. The diagram includes various dimensions, such as 18'-6" for the total width, 17'-6" for the magnet room width, and 12'-0" for the control room width. It also shows isogauss contour plots around the magnet assembly, indicating the magnetic field intensity. A note specifies that the contours are only approximations of actual field intensities. The diagram is titled 'MRI SITE PLANNING REMINDERS' and includes a list of items to be checked during installation, such as the location of electrical feeders, AC devices, and distribution systems. It also includes a section for 'IMAGE QUALITY CONSIDERATIONS' and a list of 'CRITICAL ITEMS FOR MAGNET DELIVERY'.

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