

OCCUPANCY SENSOR SCHEDULE	
Ⓞ	MULTI-TECHNOLOGY, CEILING MOUNTED OCCUPANCY SENSOR, WITH BUILT IN LIGHT LEVEL SENSING. (LINE VOLTAGE) WATTSTOPPER: DT-355-3 HUBBELL: #OMNIDT2000
Ⓞ	MULTI-TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR (LOW VOLTAGE) WATTSTOPPER: DT-300 HUBBELL: #OMNIDT2000RP PROVIDE WITH POWER PACKS AS REQUIRED PER LAYOUT. ULTRASONIC CEILING MOUNTED OCCUPANCY SENSOR, SINGLE SWITCH. WATTSTOPPER: #UT-355 HUBBELL: #OMNIUS2000
Ⓞ	MULTI-TECHNOLOGY WALL SINGLE SWITCH SENSOR, PIR AND ULTRASONIC. FITS IN SINGLE GANG BOX, SINGLE TRIM RING. WATTSTOPPER: #DW-100 HUBBELL: #LHMTS1
Ⓞ	MULTI-TECHNOLOGY WALL SWITCH SENSOR PIR & ULTRASONIC DUAL SWITCHING, DUAL RELAY, LIGHT LEVEL SENSING. FITS IN SINGLE GANG BOX, SINGLE TRIM RING. WATTSTOPPER: #DW-200 HUBBELL: #LHMTD2
GENERAL NOTES: E.C. SHALL CONTACT ARCHITECT FOR COLOR SELECTION PRIOR TO ORDER OF ANY SENSOR. FOR CEILING SPACES 14 FT. A.F.F. PIR TYPE CEILING MOUNTED SENSORS SHALL BE USED.	

- ### GENERAL ELECTRICAL NOTES
- ALL WORK SHALL BE IN CONFORMANCE WITH NATIONAL, STATE, AND LOCAL CODES AND/OR ORDINANCES.
 - SEE ARCHITECTURAL, MECHANICAL, & PLUMBING DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. THEY ARE INTENDED TO GIVE APPROXIMATE LOCATIONS AND OVERALL DESIGN INTENT. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PRODUCTS, MATERIALS, AND ELECTRICAL METHODS WHICH HAVE NOT BEEN SHOWN OR INDICATED BUT ARE REQUIRED FOR A COMPLETE SYSTEM TO THE STANDARDS OF THE INDUSTRY.
 - INSTALL LIGHTING FIXTURES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE SUPPORTING DEVICES FOR ADEQUATE SUPPORT OF FIXTURES FROM STRUCTURE.
 - UPON COMPLETION OF THE ELECTRICAL WORK, THE INSTALLATION SHALL BE TESTED FOR CONTINUITY, GROUNDS, AND SHORT CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL DEMONSTRATE PROPER PERFORMANCE OF ALL SYSTEMS. ALL DEFECTIVE WORK OR MATERIALS SHALL BE REPLACED OR REPAIRED AS NECESSARY AND RETESTED.
 - ELECTRICAL RACEWAYS THAT PENETRATE FIRE RATED ASSEMBLIES SHALL BE SLEEVED AND SEALED AS PER THE LOCAL BUILDING CODE.
 - ELECTRICAL DEVICES/EQUIPMENT SHOWN AS DASHED AND BOLD ARE EXISTING TO BE REMOVED, ELECTRICAL DEVICES/EQUIPMENT SHOWN AS LIGHT AND SOLID ARE EXISTING TO REMAIN, AND ELECTRICAL DEVICES/EQUIPMENT SHOWN AS BOLD AND SOLID SHALL BE NEW.
 - ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED COSTS AND SCHEDULING OF REQUIRED ELECTRICAL INSPECTIONS.
 - ELECTRICAL CONTRACTOR SHALL REMOVE EXISTING LIGHTNING PROTECTION FROM EQUIPMENT BEING REMOVED FROM THE ROOF. EC SHALL INSTALL NEW LIGHTNING PROTECTION ON NEW EQUIPMENT. EC SHALL CONTRACT CERTIFIED LIGHTNING PROTECTION CONTRACTOR TO PERFORM THE WORK.

ELECTRICAL SYMBOLS LEGEND

RECEPTACLES		LIGHTING	
Ⓞ	20A, 120V, 2P, 3W GROUNDING DUPLEX RECEPTACLE	Ⓞ	FIXTURE TYPE PER SCHEDULE
Ⓞ	SINGLE-PLEX RECEPTACLE	Ⓞ	TROFFER STYLE FIXTURE, TYPE AS NOTED
Ⓞ	QUADPLEX RECEPTACLE	Ⓞ	SWITCH LEGS
Ⓞ	GFCI RECEPTACLE	Ⓞ	FIXTURE ON EMERGENCY POWER
Ⓞ	RECEPTACLE MTD. 6" ABOVE COUNTER OR HGT SHOWN	Ⓞ	STRIP LIGHT
Ⓞ	MULTI-PHASE RECEPTACLE	Ⓞ	SURFACE MTD FIXTURE
Ⓞ	WEATHER-PROOF GFCI RECEPTACLE	Ⓞ	PENDANT/SURFACE MTD UP/DOWN LIGHT
Ⓞ	QUADPLEX FLOORBOX	Ⓞ	RECESSED/DOWNLIGHT FIXTURE
COMMUNICATIONS		SWITCHING	
Ⓞ	SURFACE MOUNTED RACEWAY WITH DEVICES AS NOTED	Ⓞ	20A, 120/277V SPST SWITCH
Ⓞ	TELEPHONE	Ⓞ	20A, 120/277V 3-WAY SWITCH
Ⓞ	TELEPHONE/DATA	Ⓞ	20A, 120/277V 4-WAY SWITCH
Ⓞ	DATA ONLY	Ⓞ	DIMMER SWITCH
Ⓞ	COMMUNICATION DEVICE MTD. 6" ABOVE COUNTER OR HGT SHOWN	Ⓞ	CEILING MTD OCC. SENSOR
POWER		Ⓞ	PHOTOCELL
Ⓞ	PANEL BOARD	FIRE ALARM	
Ⓞ	DISTRIBUTION PANEL BOARD	Ⓞ	MANUAL PULL STATION 46" A.F.F. CENTER
Ⓞ	DISCONNECT	Ⓞ	HORN/STROBE 82" A.F.F. TO CENTER
Ⓞ	FUSED DISCONNECT SWITCH	Ⓞ	STROBE ONLY 82" A.F.F. TO CENTER
Ⓞ	COMBINATION MOTOR STARTER	Ⓞ	CANDELA
Ⓞ	PUSH BUTTON STATION AS NOTED	Ⓞ	SMOKE DETECTOR
Ⓞ	J-BOX	Ⓞ	INDICATES ELEVATOR RECALL
Ⓞ	ELECTRICAL EQUIPMENT CONNECTION	Ⓞ	HEAT DETECTOR
Ⓞ	MOTOR CONNECTION	Ⓞ	DUCT DETECTOR

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	REFERENCE CATALOG #	LAMPS	VOLTS	NOTES
A	2X4 LED RECESSED VOLUMETRIC LIGHT FIXTURE, 4500 LMS MINIMUM, 50 WATT DRIVER, 4000K COLOR.DRIVER MUST BE ACCESSABLE FROM BELOW; 0-10V DIMMING CONTROL	COOPER	2AC-LD2-47-UNV-LP840-CD	LED	UNV	
B	2X4 LED RECESSED PRISMATIC LIGHT FIXTURE, 5700 LUMENS, 4000K COLOR. 0-10V DIMMING	COLUMBIA	LEPC24-4044G-LL-EDU	LED	UNV	
C	RECESSED LED DOWNLIGHT 8" 35K, NO LENS, DIMMING	METALUX LITHONIA	26C-LD1-57-A-UNV-L840-CD1 2TL4 46L FW A12 D50 LP840	LED	UNV	
D	2X4 LED RECESSED VOLUMETRIC LIGHT FIXTURE, 4500 LMS MINIMUM, 50 WATT DRIVER, 4000K COLOR.DRIVER MUST BE ACCESSABLE FROM BELOW; 0-10V DIMMING CONTROL	LITHONIA OR APPROVED EQUAL	DOMB 1500L 35K 120 DOB	LED	UNV	
Ⓞ	EXIT LIGHT, CAST ALUMINUM, AC ONLY POWERED WITH LED LAMPS, MATCH EXISTING BUILDING FIXTURES. FOR USE WITH GENERATOR.	COOPER	14AC-LD4-47-UNV-LP840-CD	LED	UNV	
Ⓞ	EXIT LIGHT, CAST ALUMINUM, AC ONLY POWERED WITH LED LAMPS, MATCH EXISTING BUILDING FIXTURES. FOR USE WITH GENERATOR.	COLUMBIA SURE-LITES LITHONIA APPROVED EQUAL	LEPC12-4044G-LL-EDU	LED	DUAL	

NOTES:
1. CONNECT BATTERY TO UN-SWITCHED POWER FROM THE SAME CIRCUIT FEEDING THE LIGHT.
2. FIXTURE SHALL BE ON FOCUS ON ENERGIES LIST OF HIGH EFFICIENCY LOW GLARE LINEAR FLUORESCENT FIXTURES.
3. PROVIDE WITH DRYWALL FRAMING KIT.
4. MUST BE ENERGY STAR RATED.

GENERAL NOTES:
NO SUBSTITUTIONS WITHOUT TEN DAYS PRIOR APPROVAL. PROVIDE SINGLE OR DUAL BALLASTED FIXTURES PER LAYOUT. MULTI-TAP BALLASTS ACCEPTABLE.

BASE BID EQUIPMENT COORDINATION SCHEDULE

TAG	DESCRIPTION	HP / RW	MCA RLA/FLA	VOLTS	CONDUCTORS			CONDUIT	LOCATION	PANEL	CIRCUIT	BREAKER SIZE	STARTER			DISCONNECT			NOTE
					PH	N	GND						TYPE	PROVIDED BY	INSTALLED BY	TYPE	PROVIDED BY	INSTALLED BY	
EXF-7-02A	EXISTING EF(INTERSTITIAL SPACE)	NA	NA	NA	NA	NA	NA	NA	B730.5	NA	NA	NA	VFD/D	MC	EC	VFD/D	MC	EC	1

GENERAL NOTES:
A. COORDINATE INSTALLATION OF MOTORS WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS.
B. CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE.
C. MCA=MINIMUM CIRCUIT AMPS; MOC=MINIMUM OVER-CURRENT PROTECTION; RLA=RATED LOAD AMPS; FLA=FULL LOAD AMPS
D. EC=ELECTRICAL CONTRACTOR; MC=MECHANICAL CONTRACTOR; INT=INTERGRAL TO UNIT; EQM=EQUIPMENT MANUFACTURER

MOTOR SCHEDULE NOTES:
1. CONTRACTOR TO REMOVE EXISTING COMBINATION STARTER AND INSTALL NEW VFD. EXTEND CIRCUIT AS REQUIRED.

ALTERNATE #1 EQUIPMENT COORDINATION SCHEDULE

TAG	DESCRIPTION	HP / RW	MCA RLA/FLA	VOLTS	CONDUCTORS			CONDUIT	LOCATION	PANEL	CIRCUIT	BREAKER SIZE	STARTER			DISCONNECT			NOTE
					PH	N	GND						TYPE	PROVIDED BY	INSTALLED BY	TYPE	PROVIDED BY	INSTALLED BY	
EXF-7-02A	EXISTING EF(INTERSTITIAL SPACE)	NA	NA	NA	NA	NA	NA	NA	B730.5	NA	NA	NA							1
1-EF-1	EXISTING EF(ON ROOF)	NA	NA	NA	NA	NA	NA	NA	ROOF	NA	NA	NA							2
CP-1	CIRCUIT PUMP 1	.4	NA	120	#12	#12	#12	3/4"	INTER. L7H	NA	NA	20/1	NA	NA	NA	HP/S	EC	EC	3
CP-2	CIRCUIT PUMP 2	.4	NA	120	#12	#12	#12	3/4"	INTER. L7H	NA	NA	20/1	NA	NA	NA	HP/S	EC	EC	3
AHJ-72A	EXISTING AHU(ON ROOF)	NA	NA	NA	NA	NA	NA	NA	ROOF	NA	NA	NA							4
AHU-72A	NEW AHU(ON ROOF)	2(6)/2(6)	NA	480/3	(3) #4	-	#8	1 1/4"	ROOF	EX	EX	EX	VFD	EQM	EQM	HP/S	EC	EC	5

GENERAL NOTES:
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B. CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE.
C. MCA=MINIMUM CIRCUIT AMPS; MOC=MINIMUM OVER-CURRENT PROTECTION; RLA=RATED LOAD AMPS; FLA=FULL LOAD AMPS
D. EC=ELECTRICAL CONTRACTOR; MC=MECHANICAL CONTRACTOR; INT=INTERGRAL TO UNIT; EQM=EQUIPMENT MANUFACTURER

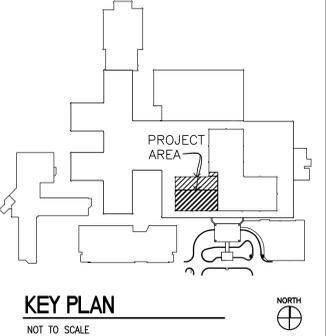
MOTOR SCHEDULE NOTES:
1. CONTRACTOR TO REMOVE EXISTING EXF-7-2A INCLUDING STARTER, CONDUIT AND WIRE BACK TO SOURCE
2. CONTRACTOR TO REMOVE EXISTING 1-EF-1 INCLUDING CONDUIT AND WIRE BACK TO SOURCE
3. PROVIDE HP RATED SWITCH TO ACT AS DISCONNECT. PUMPS ARE LOCATED DIRECTLY BELOW AHU-72A IN THE INTERSTITIAL SPACE. PROVIDE NEW 20A/1 BREAKER IN PANEL L7H FOR PUMP.
4. CONTRACTOR TO DISCONNECT AHU-72A EXISTING AND REMOVE EXISTING CONDUIT AND WIRE BACK TO SOURCE.
5. EC SHALL USE EXISTING BREAKER FROM DEMOED AHU. BREAKER SIZE SHALL REMAIN THE SAME. CONDUIT AND CONDUCTOR SIZE SHALL BE UPSIZED.

ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTERTOP	MC	MECHANICAL CONTRACTOR
AFF	ABOVE FINISH FLOOR	MCA	MINIMUM CIRCUIT AMPS
AFG	ABOVE FINISH GRADE	MDP	MAIN DISTRIBUTION PANEL
ANNC	ANNUNCIATOR	MTD	MOUNTED
CC	CONTROLS CONTRACTOR	OCC	OCCUPANCY
EC	ELECTRICAL CONTRACTOR	PC	PLUMBING CONTRACTOR
EX	EXISTING	PNL	PANEL
EXR	EXISTING RELOCATED	SPST	SINGLE POLE SINGLE THROW
GC	GENERAL CONTRACTOR	WP	WEATHER PROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPT	20A	20 AMP
IBC	INTERNATIONAL BUILDING CODE	PHASE	Ⓞ
IG	ISOLATED GROUND	3W	3 WIRE
HP	HORSEPOWER	20/1	20 AMP, SINGLE PHASE
LV	LOW VOLTAGE		

ELECTRICAL SHEET INDEX

E-000	ELECTRICAL SYMBOLS AND SPECIFICATIONS
ED-100	ELECTRICAL DEMOLITION PLAN
E-100	ELECTRICAL PLAN



Addendum	Date
Addendum 03	04/12/17
Addendum 02	04/06/17
Revisions	Date

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Drawing Title

ELECTRICAL SYMBOLS AND SPECIFICATIONS

Approved: Project Director

Project Title

REFURBISH BONE MARROW TRANSPLANT UNIT

Location: VAMC SAN ANTONIO TX

Date: NOVEMBER 12, 2015

Checked: SJW

Drawn: SJW

Project Number: E-000
Building Number: 157-15-100
Drawing Number: E-000
Dwg. 43 of 45

Office of Construction and Facilities Management
Department of Veterans Affairs