

ELECTRICAL SYMBOLS LEGEND			
SWITCHES		FIRE ALARM	
S <sub>0</sub>	SINGLE POLE SWITCH, LETTER INDICATES SWITCH LEG, 'K' INDICATES KEY TYPE, 'P' INDICATES PILOT	○	COMBINATION HEAT DETECTOR
S <sub>2</sub>	DOUBLE POLE SWITCH	◐	FIXED TEMP. HEAT DETECTOR
S <sub>3</sub>	THREE-WAY SWITCH	⌈	FIRE ALARM MANUAL STATION
S <sub>4</sub>	FOUR WAY SWITCH	⌈	FIRE ALARM COMBINATION VOICE EVACUATION/VISUAL
S <sub>0</sub>	DIMMER SWITCH	⌈	FIRE ALARM VISUAL SIGNAL
S <sub>H</sub>	HORSEPOWER RATED SWITCH	⌈	SMOKE DETECTOR
LIGHTING		⌈	MAGNETIC DOOR HOLDER
○	FLUORESCENT CEILING LUMINAIRE	TELECOMMUNICATION	
●	EMERGENCY FLUORESCENT CEILING LUMINAIRE	◀W	TELEPHONE OUTLET - WALL MOUNTED
⌈	FLUORESCENT WALL MOUNTED LUMINAIRE	◀1	TELEPHONE OUTLET
○	CEILING LUMINAIRE	◀2	DATA OUTLET
●	EMERGENCY CEILING LUMINAIRE	⌈	T.V. OUTLET
⌈	WALL MOUNTED LUMINAIRE	2"	CONDUIT SLEEVES STUBBED BETWEEN LOCATIONS INDICATED. SIZE AS NOTED ON DRAWINGS
⊗	EXIT LIGHT LUMINAIRE	ABBREVIATIONS	
⊗	EXIT LIGHT LUMINAIRE - WALL MOUNTED	[30A3]	BRANCH CIRCUIT/FEEDER SIZE. PROVIDE CIRCUIT AS INDICATED IN SCHEDULE. DO NOT COMBINE WITH OTHER CIRCUITS IN THE SAME CONDUIT.
POWER		F.A.C.P.	FIRE ALARM CONTROL PANEL
⊕	DUPLEX RECEPTACLE	H.O.A.	HAND-OFF-AUTO
⊕	FOUR-PLEX RECEPTACLE - TWO DUPLEX RECEPTACLES	NF	NON-FUSED
⊕	SPECIAL RECEPTACLE	30/3/10/3R	RATED AMPACITY/NO. POLES/FUSING REC'D/NEMA ENCL. NO.
⌈	LIGHTING & APPLIANCE PANELBOARD	DEVICE SUBSCRIPTS	
⌈	CABINET, TYPE INDICATED	WP	WEATHER-PROOF
⌈	SAFETY SWITCH	C	CEILING MOUNTED
⌈	MOTOR	G	GROUND-FAULT - CIRCUIT INTERRUPTER DEVICE
⌈	JUNCTION BOX	A	DEVICE INDICATED ABOVE DESK/TABLE/COUNTER. COORDINATE HEIGHT WITH OWNER/ARCHITECT.

BRANCH CIRCUIT/FEEDER SCHEDULE	
KEY	CONDUCTORS/CONDUIT
2 WIRE AND GROUND	
20A2	2 #12, 1 #12 G, 1/2" C
30A2	2 #10, 1 #10 G, 3/4" C
40A2	2 #8, 1 #10 G, 3/4" C
50A2	2 #6, 1 #10 G, 1" C
60A2	2 #6, 1 #10 G, 1" C
70A2	2 #4, 1 #8 G, 1-1/4" C
3 WIRE AND GROUND	
20A3	3 #12, 1 #12 G, 1/2" C
30A3	3 #10, 1 #10 G, 3/4" C
40A3	3 #8, 1 #10 G, 3/4" C
50A3	3 #6, 1 #10 G, 1" C
60A3	3 #6, 1 #10 G, 1" C
70A3	3 #4, 1 #8 G, 1-1/4" C
80A3	3 #3, 1 #8 G, 1-1/2" C
90A3	3 #3, 1 #8 G, 1-1/2" C
100A3	3 #2, 1 #8 G, 1-1/2" C
125A3	3 #1, 1 #6 G, 1-1/2" C
150A3	3 #10, 1 #6 G, 2" C
175A3	3 #20, 1 #6 G, 2" C
200A3	3 #30, 1 #6 G, 2" C
225A3	3 #40, 1 #4 G, 2-1/2" C
250A3	3 #250 KCMIL, 1 #4 G, 2-1/2" C
300A3	3 #350 KCMIL, 1 #4 G, 3" C
350A3	3 #400 KCMIL, 1 #4 G, 3" C
400A3	3 #500 KCMIL, 1 #3 G, 3" C
450A3	2 SETS (3 #40, 1 #2 G, 3" C)
500A3	2 SETS (3 #250 KCMIL, 1 #2 G, 2-1/2" C)
600A3	2 SETS (3 #350 KCMIL, 1 #1 G, 3" C)
700A3	2 SETS (3 #500 KCMIL, 1 #1/0 G, 3" C)
800A3	2 SETS (3 #600 KCMIL, 1 #1/0 G, 4" C)
1000A3	3 SETS (3 #400 KCMIL, 1 #2/0 G, 3" C)
1200A3	3 SETS (3 #600 KCMIL, 1 #3/0 G, 4" C)
4 WIRE AND GROUND	
20A4	4 #12, 1 #12 G, 1/2" C
30A4	4 #10, 1 #10 G, 3/4" C
40A4	4 #8, 1 #10 G, 1" C
50A4	4 #6, 1 #10 G, 1" C
60A4	4 #6, 1 #10 G, 1" C
70A4	4 #4, 1 #8 G, 1-1/4" C
80A4	4 #3, 1 #8 G, 1-1/2" C
90A4	4 #3, 1 #8 G, 1-1/2" C
100A4	4 #2, 1 #8 G, 1-1/2" C
125A4	4 #1, 1 #6 G, 2" C
150A4	4 #10, 1 #6 G, 2" C
175A4	4 #20, 1 #6 G, 2-1/2" C
200A4	4 #30, 1 #6 G, 2-1/2" C
225A4	4 #40, 1 #4 G, 3" C
250A4	4 #250 KCMIL, 1 #4 G, 3" C
300A4	4 #350 KCMIL, 1 #4 G, 3-1/2" C
350A4	4 #400 KCMIL, 1 #3 G, 3-1/2" C
400A4	4 #500 KCMIL, 1 #3 G, 3-1/2" C
450A4	2 SETS (4 #40, 1 #2G, 3" C)
500A4	2 SETS (4 #250 KCMIL, 1 #2G, 3" C)
600A4	2 SETS (4 #350 KCMIL, 1 #1G, 3-1/2" C)
700A4	2 SETS (4 #500 KCMIL, 1 #1/0 G, 3-1/2" C)
800A4	2 SETS (4 #600 KCMIL, 1 #1/0 G, 4" C)
1000A4	3 SETS (4 #400 KCMIL, 1 #2/0 G, 3-1/2" C)
1200A4	3 SETS (4 #600 KCMIL, 1 #3/0 G, 4" C)

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE														
ABBREVIATIONS:														
FLA	FULL LOAD AMPS	C	COMBINATION STARTER AND SAFETY SWITCH		2S	TWO SPEED			N1	NEMA 1				
HP	HORSEPOWER				3S	THREE SPEED			N3R	NEMA 3R				
KW	KILOWATTS	CB	CIRCUIT BREAKER		FV	FULL VOLTAGE			N4X	NEMA 4X				
PH	PHASE	SH	HP RATED SWITCH		NR	NON-REVERSING								
V	VOLTAGE	SS	SAFETY SWITCH		RE	REVERSING								
E	ELECTRICAL CONTRACTOR	MR	PER MANUFACTURER'S RECOMMENDATIONS		RV	REDUCED VOLTAGE								
I	INTEGRAL WITH EQUIPMENT				VFC	VARIABLE FREQUENCY								
M	MECHANICAL CONTRACTOR	NF	NON-FUSED											
EQUIPMENT			ELECTRICAL SYSTEM			DISCONNECT				CONTROLLER			REMARKS	
ID	DESCRIPTION	LOAD	V	PH	PANEL - CIRCUIT	FURNISH/ INSTALL BY	TYPE	RATING (AMPS)	FUSE SIZE	ENCL.	FURNISH/ INSTALL BY	TYPE/ NEMA SIZE		ENCL.
EF-1.1	CEILING EXHAUST FAN	1.1 A	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
EF-1.2	CEILING EXHAUST FAN	1.1 A	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
EF-2.1	CEILING EXHAUST FAN	1.3 A	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
EF-3.1	INLINE CABINET EXHAUST FAN (ALT. BID #2)	3.1 A	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
EF-3.2	INLINE CABINET EXHAUST FAN (ALT. BID #2)	3.1 A	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
EUH-1.1	ELECTRIC UNIT HEATER	1.5 KW	120	1	CAN-23	M/M	-	-	-	-	M/M	-	-	
EUH-1.2	ELECTRIC UNIT HEATER	1.5 KW	120	1	CAN-25	M/M	-	-	-	-	M/M	-	-	
EWC 1.1	ELECTRIC WATER COOLER	-	120	1	-	-	-	-	-	-	-	-	-	1
FC-1.1	FAN COIL UNIT	2 KW	120	1	CAN-30	E/E	SS	30	MR	N1	M/M	-	-	
FC-1.2	FAN COIL UNIT (ALT BID #1)	7 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.1	FAN COIL UNIT	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.2	FAN COIL UNIT	3 KW	208	1	CAN-18	E/E	SS	30	MR	N1	M/M	-	-	
FC-2.3	FAN COIL UNIT	2 KW	120	1	CAN-26	E/E	SS	30	MR	N1	M/M	-	-	
FC-2.4	FAN COIL UNIT	1.4 FLA	120	1	CAN-39	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.5	FAN COIL UNIT	1.4 FLA	120	1	CAN-39	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.6	FAN COIL UNIT	1.4 FLA	120	1	CAN-37	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.7	FAN COIL UNIT	1.4 FLA	120	1	CAN-37	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.8	FAN COIL UNIT (EXCLUDED AS PART OF ALT. #2)	1.4 FLA	120	1	CAN-37	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.9	FAN COIL UNIT (EXCLUDED AS PART OF ALT. #2)	1.4 FLA	120	1	CAN-37	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.10	FAN COIL UNIT (ALT BID #1)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.11	FAN COIL UNIT (ALT BID #1)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.12	FAN COIL UNIT (ALT BID #1)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.13	FAN COIL UNIT (ALT BID #1)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.14	FAN COIL UNIT (ALT BID #2)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-2.15	FAN COIL UNIT (ALT BID #2)	1.4 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-3.1	FAN COIL UNIT	1.6 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-3.2	FAN COIL UNIT	1.6 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-3.3	FAN COIL UNIT	1.6 FLA	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
FC-3.4	FAN COIL UNIT	1.6 FLA	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
FC-3.5	FAN COIL UNIT (ALT BID #1)	1.6 FLA	120	1	SEE DRAWINGS	E/E	SH	15	MR	N1	M/M	-	-	
FC-4.1	FAN COIL UNIT	6 KW	208	1	CAN-22	E/E	SS	60	MR	N1	M/M	-	-	
FC-4.2	FAN COIL UNIT	1.7 FLA	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
FC-4.3	FAN COIL UNIT	1.7 FLA	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
FC-4.4	FAN COIL UNIT	1.7 FLA	120	1	CAN-28	E/E	SH	15	MR	N1	M/M	-	-	
FC-5.1	FAN COIL UNIT	3.1 FLA	120	1	CAN-39	E/E	SH	15	MR	N1	M/M	-	-	
TU-1.1	SINGLE DUCT TERMINAL UNIT (ALT. BID #1)	2 KW	208	1	SEE DRAWINGS	E/E	SS	30	MR	N1	M/M	-	-	
TU-2.4	SINGLE DUCT TERMINAL UNIT (ALT. BID #1)	5 KW	208	1	SEE DRAWINGS	E/E	SS	30	MR	N1	M/M	-	-	

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY/COORDINATE ALL RATINGS FOR EQUIPMENT SUPPLIED BY THE SELECTED MANUFACTURER. WHERE RATINGS ARE OTHER THAN AS REQUIRED FOR SPECIFIED UNIT, DISCONNECTS, MOTOR STARTERS, OVERCURRENT DEVICES AND RELATED REVISIONS SHALL BE PROVIDED ACCORDINGLY. THE CONTRACTOR THAT FURNISHES EQUIPMENT WITH RATINGS OTHER THAN AS NOTED SHALL BE RESPONSIBLE FOR ALL COORDINATION AND COSTS FOR REVISIONS TO ACCOMMODATE SELECTED EQUIPMENT.

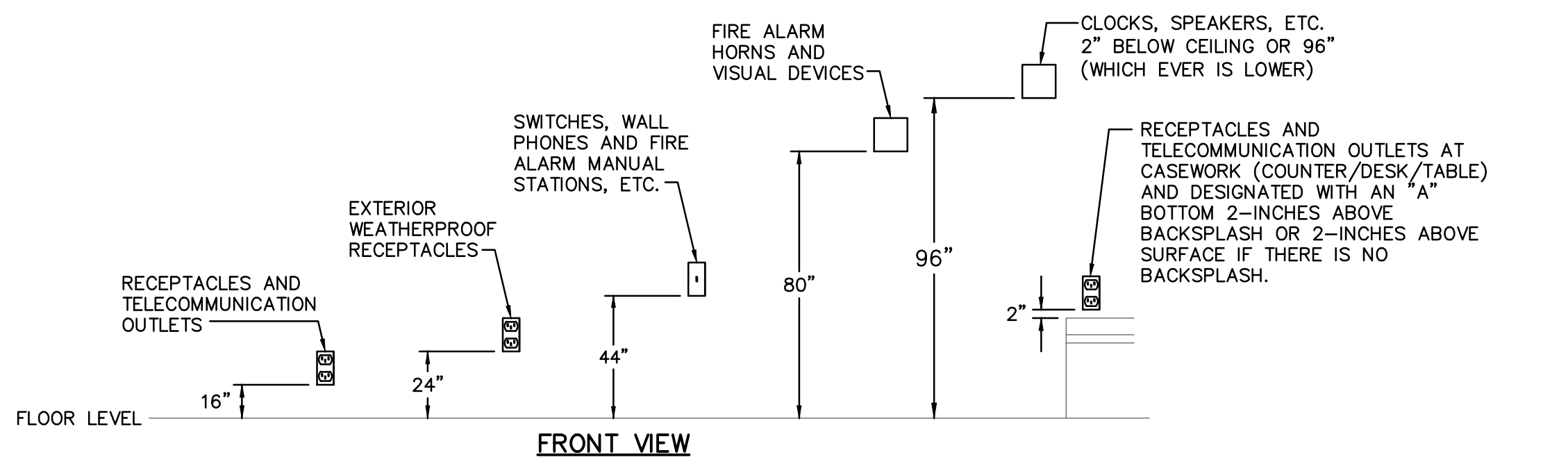
B. ALL FRACTIONAL HORSEPOWER MOTORS SHALL BE PROVIDED WITH INTEGRAL OVERLOAD PROTECTION.

C. HORSEPOWER RATED SWITCHES (SH): FOR 120 V MOTORS LESS THAN 1/2 HP, PROVIDE FUSEHOLDER WITH SWITCH, FUSED PER MANUFACTURER'S RECOMMENDATION AND NEC REQUIREMENTS. FOR 208 VOLT 1-PHASE MOTORS LESS THAN 3/4 HP PROVIDE FUSE HOLDER WITH DOUBLE-POLE SWITCH THAT OPENS BOTH CONDUCTORS OF THE CIRCUIT. RATING OF FUSES SHALL NOT EXCEED 15 AMPS. FOR 120 V MOTORS RATED 1/2 HP OR 3/4 HP, PROVIDE HP RATED TOGGLE SWITCH (WHERE BRANCH CIRCUIT OVERCURRENT DEVICE MEETS NEC REQUIREMENTS FOR SHORT-CIRCUIT PROTECTION) OR FUSED SAFETY SWITCH.

D. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT TO EQUIPMENT AS INDICATED.

REMARKS:

1. CORD AND PLUG CONNECTED.



### 1 TYPICAL ELECTRICAL DEVICE MOUNTING HEIGHT

NOT TO SCALE

### GENERAL ELECTRICAL KEYNOTES

- A. PROVIDE OCCUPANCY SENSOR CONTROL OF THE LIGHTING IN ROOM/AREA WITH THIS KEYNOTE UNLESS OTHERWISE NOTED. THIS AUTOMATIC CONTROL SHALL BE IN ADDITION TO AND CONNECTED ON THE LINE SIDE OF MANUAL CONTROL SHOWN. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- B. LOCATE RECEPTACLE IN CABINET ABOVE FOR MICROWAVE.
- C. CONNECT TO EXISTING UNSWITCHED LIFE SAFETY (EMERGENCY) LIGHTING CIRCUIT SERVING AREA.
- D. PROVIDE ROUGH-IN FOR PROXIMITY READER. SEE DETAIL SHEET E3.1.
- E. CONNECT TO EXISTING UNSWITCHED LIGHTING CIRCUIT SERVING AREA.
- F. ALL EXISTING CEILING MOUNTED WIRELESS ACCESS POINTS (W.A.P.) SHALL BE REMOVED AND REINSTALLED BY THE OWNER. AFTER THE W.A.P. IS REMOVED THE CONTRACTOR SHALL NEATLY COIL AND LABEL THE TELECOMMUNICATION CABLE AND SUPPORT FROM STRUCTURE IN A SAFE LOCATION SO AS TO PROTECT THE CABLE FROM DAMAGE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETE THE OWNER SHALL RELOCATE THE TELECOMMUNICATION CABLE AND INSTALL THE W.A.P. COORDINATE ALL WORK FOR REMOVAL OF THE W.A.P. WITH THE COTR.
- G. CONNECT TO SPARE 20/1 CIRCUIT BREAKER IN PANEL INDICATED. CIRCUIT BREAKER MADE SPARE BY REMOVAL.
- H. PROVIDE 20/1 CIRCUIT BREAKER IN PANEL NOTED AND CONNECT CIRCUIT INDICATED.

### GENERAL ELECTRICAL NOTES

- a. ALL CONDUITS IN NEW WALLS, EXISTING STUD WALLS, OR IN AREAS WITH SUSPENDED CEILINGS SHALL BE INSTALLED CONCEALED.
- b. BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON EXISTING WALLS OR EXPOSED CEILINGS WHERE RACEWAY CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE METAL RACEWAY.
- c. ALL EXPOSED RACEWAY IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH SURROUNDING SURFACE. COORDINATE COLOR WITH ARCHITECT. ALL EXPOSED RACEWAY AND FITTINGS IN ROOMS WHICH ARE NOT TO BE PAINTED SHALL BE WIREMOLD #500 OR #V700 OR #V2400 SERIES WITH FACTORY IVORY FINISH. RACEWAY SUPPORT CLIPS SHALL BE V5703 SERIES.
- d. SURFACE RACEWAY FOR TV CABLE SHALL NOT BE SMALLER THAN WIREMOLD #V700.
- e. SURFACE RACEWAY FOR TELECOMMUNICATION CABLE SHALL NOT BE SMALLER THAN WIREMOLD #V2400. PROVIDE COMPATIBLE 2 GANG EXTRA DEEP DEVICE BOX. ALL FITTINGS FOR TELECOMMUNICATION RACEWAYS SHALL COMPLY WITH EIA STANDARDS FOR BEND RADIUS.
- f. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILINGS, OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION OR INSTALLATION OF ELECTRICAL WORK.
- g. REFER TO MECHANICAL/ELECTRICAL COORDINATION SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- h. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE AND SMOKE DAMPERS INCLUDING POWER, FIRE ALARM, ETC. VERIFY EXACT LOCATION AND QUANTITY OF DAMPERS WITH MECHANICAL DRAWINGS.
- i. LABELING FOR PANELBOARD DIRECTORIES, FIRE ALARM PANEL PROGRAMMING, ETC. SHALL USE ROOM NUMBERS ASSIGNED BY OWNER AND NOT ROOM NUMBERS LISTED ON DRAWINGS. LABELS ON PANELBOARD DIRECTORY SHALL INCLUDE A DESCRIPTION OF LOAD SUCH AS LIGHTS, RECEPTACLES, MECHANICAL UNIT LOCATIONS, ETC.
- j. KEYNOTES FOR OCCUPANCY SENSORS SHOWN ON THE DRAWINGS INDICATE ONLY THE ROOM/AREA TO BE CONTROLLED BY THE SENSORS. PROVIDE SENSORS AND RELATED EQUIPMENT AS REQUIRED FOR COMPLETE COVERAGE AND SWITCHING ARRANGEMENTS AS SHOWN ON DRAWINGS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- k. MULTIWIRE BRANCH CIRCUITS AS DEFINED BY THE NATIONAL ELECTRICAL CODE (CIRCUITS WITH COMMON NEUTRAL) SHALL NOT BE USED. EXCEPTION: WHERE AN EQUIPMENT MANUFACTURER REQUIRES A MULTIWIRE BRANCH CIRCUIT FOR ONLY ONE UTILIZATION EQUIPMENT AND WHERE ALL UNGROUNDED CONDUCTORS OF THAT CIRCUIT ARE OPENED SIMULTANEOUSLY BY THE BRANCH CIRCUIT OVERCURRENT DEVICE.
- l. THE SPECIFICATIONS LIST ACCEPTABLE WIRING METHODS AND MATERIALS. OTHER WIRING METHODS AND MATERIALS NOT LISTED IN THE SPECIFICATIONS (SUCH AS MC CABLE, ETC.) ARE NOT ACCEPTABLE.
- m. ALL POWER/DATA LOCATIONS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.

Revisions	Date	© 2000 Calvin L. Hinz Architects P.C. These plans are specifically designed for construction by Calvin L. Hinz Architects and are intended for no other purposes. Permission for use of this document in part or whole without written consent of Calvin L. Hinz Architects is prohibited.	IMPORTANT CONTRACTOR'S NOTE 1. ALL CONTRACTORS ARE RESPONSIBLE FOR REVIEWING ENTIRE SET OF DOCUMENTS TO DETERMINE THEIR FULL SCOPE OF WORK. CONTRACTOR SHALL NOT BE ALLOWED EXTRA COSTS DUE TO FAILURE TO REVIEW ENTIRE SET OF DOCUMENTS. 2. ANY USE OF THESE ELECTRONIC DRAWINGS OR SCALING OF THE PRINTED DOCUMENTS ARE DONE SO AT THE CONTRACTORS RISK.	CLH Calvin L. Hinz Architects, P.C. 3705 North 200th Street Elkhorn, Nebraska 68022 Phone: 402.291.6941 Fax: 402.291.9193	ARCHITECT/ENGINEERS: KRS KRS Engineering, LLC 11620 ARBOR STREET SUITE 100 CHAMPA, NEBRASKA 68144 PHONE: 402.932.0100 FAX: 402.932.1001 www.krsengineering.com KRS # 121013 This document and the information contained may not be reproduced without the express written permission of KRS Engineering, LLC. Unauthorized copying, disclosure or construction use are prohibited by the copyright law.	Drawing Title - ELECTRICAL COORDINATION Approved Project Director KEVIN HUTSELL	Project Title RENOVATE BACKFILL CANTEN SPACE NWIHCs Location VAMC Grand Island, NE Date APRIL 13, 2012 Checked KJM Drawn GJH	Project Number 636-12-103 Building Number ONE Drawing Number E0.0 Dwg. 33 of 40	Office of Construction and Facilities Management Department of Veterans Affairs
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