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Building Codes Division
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GENERAL ELECTRICAL LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHTING		
	RECESSED FLUORESCENT LUMINAIRE, LAY-IN		RECESS MOUNTED WALL LUMINAIRE
	RECESSED FLUORESCENT LUMINAIRE, FLANGED	PC	PORCELAIN KEYLESS LAMPHOLDER, BRYANT #5228 W/ 100W A19 I.F. LAMP. "PC" INDICATES PULLCHAIN
	SURFACE OR PENDANT MOUNTED LUMINAIRE		TRACK LIGHTING
	SURFACE OR PENDANT MOUNTED STRIP OR INDUSTRIAL LUMINAIRE		EMERGENCY LIGHTING UNIT
	SHADING INDICATES EM SYSTEM, LOWER CASE SUBSCRIPT INDICATES SWITCHING, UPPER CASE SUBSCRIPT INDICATES LUMINAIRE TYPE (TYP)		EXIT LIGHT, ARROWS AS INDICATED, FACES INDICATED BY SHADING
	SURFACE MOUNTED CEILING LUMINAIRE (EXTERIOR BOLLARD LUMINAIRE, ON SITE PLAN)		POLE MOUNTED LUMINAIRE
	SURFACE MOUNTED WALL LUMINAIRE		SPOT LIGHT
	RECESS MOUNTED CEILING LUMINAIRE		DARKROOM SAFE LIGHT (TWO COMPARTMENT SHOWN)
	RECESS MOUNTED CEILING LUMINAIRE-DIRECTIONAL		UNDERCOUNTER LIGHTING
	POWER		
	SINGLE RECEPTACLE		MOTOR STARTER
	DUPLEX RECEPTACLE	PW	PLUG-MOLD (MULTI-OULET ASSEMBLY)
GFI	DUPLEX RECEPTACLE, GROUND FAULT PROTECTION	WM	WIREMOLD (SURFACE RACEWAY)
IG	DUPLEX RECEPTACLE, ISOLATED GROUND		CONNECTION TO PREWIRED EQUIPMENT
	DOUBLE DUPLEX RECEPTACLE		FLEXIBLE WIRING CABLE
	DUPLEX RECEPTACLE, HALF SWITCHED		CONDUIT, CONCEALED
	DUPLEX RECEPTACLE, CEILING MOUNTED		CONDUIT, EXPOSED
	DUPLEX RECEPTACLE, FLOOR MOUNTED		CONDUIT, UNDERGROUND OR CONCEALED IN FLOOR
	DOUBLE DUPLEX RECEPTACLE, FLOOR MOUNTED		CONDUIT TURNING DOWN
	SPECIAL RECEPTACLE		CONDUIT TURNING UP
	SPECIAL RECEPTACLE, FLOOR MOUNTED		CONDUIT CAPPED
	THERMOSTAT	A-1,2,3	BRANCH CIRCUIT HOME RUN, NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS, SUBSCRIPT INDICATES PANEL & CIRCUITS
	JUNCTION BOX, WALL OR CEILING MOUNTED		GROUND BAR
J	JUNCTION BOX, FLOOR MOUNTED		ELECTRICAL PANELBOARD, CONTROL PANEL OR OTHER CABINET, AS NOTED
	FLEXIBLE WIRING DISTRIBUTION BOX		MAIN SWITCHBOARD/DISTRIBUTION CENTER
M	MOTOR	T	TRANSFORMER
	DISCONNECT SWITCH (NON-FUSED)	CT	CURRENT TRANSFORMER CABINET
	DISCONNECT SWITCH (FUSED)	M	UTILITY METER
	COMBINATION STARTER/DISCONNECT	GANN	GENERATOR ANNUNCIATOR PANEL
	SWITCHING		
S_S	SINGLE POLE SWITCH (SUBSCRIPT DENOTES SWITCHING)	S_{LV}	LOW VOLTAGE SWITCH
S_2	TWO POLE SWITCH	S_{VS}	VARIABLE SPEED SWITCH
S_3	THREE-WAY SWITCH	S_{EP}	EXPLOSION PROOF SWITCH
S_4	FOUR-WAY SWITCH	S_{TO}	THERMAL OVERLOAD SWITCH
S_K	KEY OPERATED SWITCH	S_{MC}	MOMENTARY CONTACT SWITCH
S_M	MANUAL SWITCH, HORSEPOWER RATED		COMBINATION SWITCH AND DUPLEX RECEPTACLE
S_D	DIMMER SWITCH	P	PHOTOCELL CONTROL
S_{PL}	SWITCH WITH PILOT LIGHT (PILOT LIGHT IS "ON" WHEN SWITCH IS "ON")		PUSHBUTTON
S_P	SWITCH WITH PILOT LIGHT LOCATOR (CONTINUOUSLY LIGHTED HANDLE)	TC	TIME CLOCK
			OCCUPANCY SENSOR
	REFERENCE SYMBOLS		
	DETAIL NOTE REFERENCE		EXISTING TO REMAIN
	KITCHEN EQUIPMENT REFERENCE		EXISTING TO BE REMOVED
	MECHANICAL EQUIPMENT REFERENCE		EXISTING TO BE RELOCATED
			EXISTING TO REMAIN – REPLACE DEVICE

ABBREVIATIONS

A	AMPERES	MCP	MOTOR CIRCUIT PROTECTOR
AC	ABOVE COUNTER, MOUNT HORIZONTALLY TO CENTERLINE OF DEVICE±6" ABOVE COUNTER OR BACK SPLASH	MEC	SEE MECHANICAL EQUIPMENT SCHEDULE
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
ANN	ANNUNCIATOR	MTS	MANUAL TRANSFER SWITCH
ARF	ABOVE RAISED FLOOR	NC	NORMALLY CLOSED
ASSD	AIR SAMPLING SMOKE DETECTION	NIC	NOT IN CONTRACT
ATS	AUTOMATIC TRANSFER SWITCH	NL	NIGHT LIGHT
BFG	BELOW FINISHED GRADE	NO	NORMALLY OPEN
C	CONDUIT	NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
CB	CIRCUIT BREAKER	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CCTV	CLOSED CIRCUIT TELEVISION	OFOI	OWNER FURNISHED, OWNER INSTALLED
(E)	EXISTING	OSWF	ON SITE WORK FORCE
EM	EMERGENCY	PB	PULL BOX
EMDC	EMERGENCY MAIN DISTRIBUTION CENTER	SB	STAND-BY
EP	EXPLOSION PROOF	SDC	SUB-DISTRIBUTION CENTER
EPO	EMERGENCY POWER OFF	TP	TAMPER PROOF
EVO	EMERGENCY VENTILATION ON/OFF	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
EWC	ELECTRIC WATER COOLER	TYP	TYPICAL
FA	FIRE ALARM	UF	UNDER FLOOR
G	GROUND	UG	UNDER GROUND
GCP	GENERATOR CONTROL PANEL	UON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTING	UPS	UNINTERRUPTABLE POWER SUPPLY
HOA	HAND OFF AUTOMATIC	V	VOLTS
IG	ISOLATED GROUND	VFD	VARIABLE FREQUENCY DRIVE
MAX	MAXIMUM	W/	WITH
MCB	MAIN CIRCUIT BREAKER	W/O	WITHOUT
MCC	MOTOR CONTROL CENTER	WP	WEATHER PROOF
MDC	MAIN DISTRIBUTION CENTER	XFMR	TRANSFORMER

SYSTEMS LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TELEPHONE TERMINAL CABINET	CO	COMBINATION CLOCK/SPEAKER OUTLET
	TELEPHONE TERMINAL BACKBOARD	S	PAGING SYSTEM SPEAKER 'M' INDICATES MUSIC SYSTEM ONLY
	TELEPHONE OUTLET W=WALL, P=PAY	V	VOLUME CONTROL
	TELEPHONE OUTLET, FLOOR MOUNTED	M	MICROPHONE STATION
TP	TELEPHONE/POWER POLE	I	INTERCOM STATION
	DATA OUTLET	D	DOOR CONTACT
	DATA OUTLET, FLOOR MOUNTED	CR	CARD READER
	COMBINATION TELEPHONE/DATA OUTLET	MD R,I,U,S	MOTION DETECTOR R=INFRARED, U/S=ULTRASONIC, R/U/S=COMBINATION
	COMBINATION TELEPHONE/DATA OUTLET, FLOOR MOUNTED		SECURITY CAMERA
	BELL	ES	ELECTRIC DOOR STRIKE
C	CHIME	SCP	SECURITY CONTROL PANEL
B	BUZZER	ML	MAGNETIC DOOR LOCK
	TELEVISION OUTLET	GB	GLASS BREAK DETECTOR
C	CLOCK OUTLET	KP	KEYPAD
			BEACON B=BLUE, R=RED

FIRE ALARM SYSTEM LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL	RDU	REMOTE DISPLAY UNIT
ANN	FIRE ALARM ANNUNCIATOR PANEL	ASSD	AIR SAMPLING SMOKE DETECTOR
GDM	GRAPHIC ZONE MAP		AIR SAMPLING POINT
F	FIRE ALARM SYSTEM DEVICE (ANY TYPE)	F_{RI}	REMOTE INDICATOR LIGHT
F_M	MANUAL PULL STATION	F_{FR}	FAN SHUT DOWN RELAY
$F_{I,PE}$	FIRE ALARM DETECTOR I=IONIZATION, PE=PHOTOELECTRIC	F_{DH}	DOOR HOLDER, MAGNETIC
$F_{(T,FT)}$	THERMAL DETECTOR T=FIXED TEMPERATURE, FT=FIXED TEMPERATURE & RATE OF RISE (TEMP. RATING)	F_{SD}	SPRINKLER FLOW FIRE ALARM
$F_{UV/IR}$	FLAME DETECTOR UV=ULTRAVIOLET, IR=INFRARED	F_{TS}	SPRINKLER TAMPER SWITCH
$F_{D/R}$	DUCT SMOKE DETECTOR S=SUPPLY, R=RETURN	F_{FS}	SPRINKLER FLOW SWITCH
F_T	BEAM TYPE SMOKE DETECTOR – TRANSMITTER	a b	FIRE ALARM VOICE EVACUATION SPEAKER "a" INDICATES RISER CIRCUIT DESIGNATION
F_R	BEAM TYPE SMOKE DETECTOR – RECEIVER	a b	FIRE ALARM VOICE EVACUATION SPEAKER (W/STROBE) "a" INDICATES RISER CIRCUIT DESIGNATION
F_K	FIRE ALARM STROBE	F_{TW}	TELEPHONE JACK F=FIREMAN'S, W=WARDEN'S
	FIRE ALARM HORN	F_{MM}	FIRE ALARM MONITOR MODULE
F_C	FIRE ALARM CHIME	F_{CM}	FIRE ALARM CONTROL MODULE
$F_{H/S}$	FIRE ALARM DEVICE H/S=HORN/STROBE COMBINATION, S/S=SPEAKER/STROBE COMBINATION, C/S=CHIME/STROBE COMBINATION	EOLR	END OF LINE RESISTOR
F_{RTS}	DUCT SMOKE DETECTOR REMOTE INDICATOR LIGHT AND REMOTE TEST STATION	FSD	INDICATES A FIRE ALARM DEVICE CONTROLLING A FIRE/SMOKE DAMPER

ONE-LINE DIAGRAM LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DISCONNECT SWITCH	A	PANELBOARD "A"
	DISCONNECT SWITCH, FUSED	DM	DIGITAL METERING PANEL
	CIRCUIT BREAKER	VS	VOLTMETER TEST SWITCH
	FUSE	AS	AMMETER TEST SWITCH
	GROUND	V	VOLTMETER
	STEP DOWN TRANSFORMER, ## INDICATES KVA	A	AMMETER
K##	K-RATED STEP DOWN TRANSFORMER, ## INDICATES KVA	XFMR	SEE TRANSFORMER SCHEDULE FOR FEEDER SIZE
	CURRENT TRANSFORMER	MEC	SEE MECHANICAL EQUIPMENT SCHEDULE FOR BREAKER/FEEDER SIZE
	POTENTIAL TRANSFORMER	SEE	SEE FEEDER SCHEDULE FOR FEEDER SIZE
	SERVICE ENTRANCE TRANSFORMER	G	ENGINE GENERATOR
M	UTILITY METER		CONTACTOR/RELAY/CAPACITOR (AS NOTED)
	EQUIPMENT ENCLOSURE		TRANSFER SWITCH – ATS=AUTOMATIC, MTS=MANUAL
	SERVICE WEATHERHEAD	GFI	GROUND FAULT INTERUPTER
SCA	SHORT CIRCUIT CURRENT AVAILABLE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
K	KIRK KEY INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP	ST	SHUNT TRIP
K	ELECTRICAL INTERLOCK, SUBSCRIPT INDICATES INTERLOCKED GROUP		TERMINATIONS LB=LOAD BREAK, NLB=NO LOAD BREAK
K	MECHANICAL INTERLOCK		DRAW-OUT DEVICE
EO	ELECTRICALLY OPERATED		PLUG-IN DEVICE

LIGHTNING PROTECTION SYSTEM LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	AIR TERMINAL		INSPECTION SLEEVE
	GROUND ROD		GROUND ROD WITH INSPECTION SLEEVE
	BOND TO LIGHTNING PROTECTION CONDUCTOR	L	LIGHTNING PROTECTION CONDUCTOR
		L	BURIED LIGHTNING PROTECTION CONDUCTOR

NURSE CALL LEGEND

(Not all symbols listed below are used on these drawings)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	SINGLE PATIENT STATION	PB	EMERGENCY STATION PC=PULL CORD, PB=PUSHBUTTON
2	DOUBLE PATIENT STATION		DOME LIGHT, WALL MOUNTED
S	STAFF STATION		DOME LIGHT, CEILING MOUNTED
D	DUTY STATION	C	ELAPSE TIME CLOCK
M	MASTER STATION	C	TIME CLOCK REMOTE CONTROL
CB	CODE BLUE STATION	P	PRESENCE STATION
NCAP	NURSE CALL ANNUNCIATOR PANEL	NCPP	NURSE CALL POWER PANEL

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	LAMPS	VOLT AMPS	MANUFACTURER	CATALOG NO.	VOLTAGE	FINISH	MOUNTING	RECESS
F1	2'X2' RECESSED DIRECT/INDIRECT RECESSED WITH BAX LAMPS AND ELECTRONIC BALLAST CORRIDORS, TOILETS	2-FT42DL/835	90	LITHONIA COLUMBIA	AV 2 CF40 MDR 277 GEB10 STR-22-3-40IT-C-MPO-EBTI-277	277	WHITE	GRID	5-1/2"
F1E	SAME AS F1 WITH EMERGENCY BATTERY BALLAST CAPABLE OF 900 LUMEN OUTPUT	2-FT42DL/835	90	LITHONIA COLUMBIA	AV 2 CF40 MDR 277 GEB10 STR-22-3-40IT-C-MPO-EBTI-277	277	WHITE	GRID	5-1/2"
F2	6" DIAMETER FLUORESCENT DOWN LIGHT W ELECTRONIC BALLAST CORRIDORS	2-CF26DD/E/835	60	LITHONIA PRESCOLITE	AF7 -2/26TT-6AR-277-GEB LF7639MEB-SITF602G	277	--	RECESS	8"
F2E	SAME AS F2 W EMERGENCY BATTERY BALLAST	2-CF26DD/E/835	60	LITHONIA PRESCOLITE	AF7 -2/26TT-6AR-277-GEB LF7639MEB-SITF602G	277	--	RECESS	8"
F3	FLUORESCENT WALL SCONCE W ELECTRONIC BALLAST CORRIDORS	1-13WCF	20	ESTILUZ MINONA	A-808HF 4623-7-277-OA-BSS-STD	277	BY ARCH	WALL SURFACE	--
F4	RECESSED PERIMETER COVE LUMINAIRE PARABLOOK LOUVER; ELECTRONIC BALLAST TOILETS	2-FO32/835	70	LITHONIA ALERA	RP 2 TR 2S 277 GEB 10 RS-PB1U2O AL-2TB-P-R-LD-EBB-277-S	277	--	RECESS	6"
F4E	SAME AS F4 W EMERGENCY BATTERY BALLAST CAPABLE OF 900 LUMEN OUTPUT	2-FO32/835	70	LITHONIA ALERA	RP 2 TR 2S 277 GEB 10 RS-PB1U2O AL-2TB-P-R-LD-EBB-277-S	277	--	RECESS	6"
F5E	WALL BRACKET FLUORESCENT UP/DOWN LUMINAIRE W EMERGENCY BATTERY BALLAST CAPABLE OF 900 LUMENS – STAIRWELLS	2-FO32/735	70	LITHONIA COLUMBIA	WC-2-32-1212S-277-EL W4-232-EBB-277-EM	277	WHITE	WALL SURFACE	--
F6	OPEN FLUORESCENT STRIP – CHAIN MOUNT WITH ELECTRONIC BALLAST SHELL, UTILITY SPACES	2-FO32/735	70	LITHONIA COLUMBIA	C-2-32-277-GEB-HC CS4-232-EBB-277	277	--	CHAIN	--
F6E	SAME AS F6 W EMERGENCY BATTERY BALLAST CAPABLE OF 900 LUMENS	2-FO32/735	70	LITHONIA COLUMBIA	C-2-32-277-GEB-HC-EL CS4-232-EBB-277-EM	277	--	CHAIN	--
F6A	SAME AS F6 WITH BATTERY BACKED BALLAST – 120V ELEVATOR EQUIPMENT ROOM	2-FO32/735	70	LITHONIA COLUMBIA	C-2-32-120-GEB-HC CS4-232-EBB-277-EM	120	--	CHAIN	--
F7	18" DIAMETER DECORATIVE 85W FLUSH MOUNT MOUNTED LUMINAIRE	1- 75W A19	75	LOUIS POULSEN	PH3/P-P/1/75W/A-19 /IF medium/120V/GLASS	120	GLASS	PENDANT	PER ARCH
F8	4" COVE MOUNTED LUMINAIRE W DIRECTIONAL REFLECTOR AND ELECTRONIC BALLAST CORRIDORS	2-FO32/835	70	LITHONIA COLUMBIA	S-2-32-277-GEB-EL W SARS-48 REFLECTOR MS-1032OCT	277	--	ARCH COVE	--
F8E	SAME AS F8 WITH EMERGENCY BALLAST CAPABLE OF 900 LUMENS	2-FO32/835	70	LITHONIA COLUMBIA	S-2-32-277-GEB-EL W SARS-48 REFLECTOR MS-1032OCT	277	--	ARCH COVE	--
F9	2'X4' RECESSED TROFFER WITH ACRYLIC LENS AND ELECTRONIC BALLAST	3-FO32/735	105	LITHONIA COLUMBIA	2GRB-G-332-A12I25-MVOLT-1/3-GEB-PMS1836 -LP725 STB-24-332C-SJSERBLH-277	277	--	2X4 GRID	4-1/2"
F10	3" COVE MOUNTED LUMINAIRE W DIRECTIONAL REFLECTOR AND ELECTRONIC BALLAST CORRIDORS	2-FO25/835	70	LITHONIA COLUMBIA	S-2-25-277-GEB W SARS-48 REFLECTOR MS-1025OCT	277	--	ARCH COVE	--
H1	WALL MOUNTED DIRECT/INDIRECT UPLIGHT CANOPY	1-M70/C/U/MED	95	MINDRECT	P3-M5W-M470-277V-MS3-SOW –PC-STD	277	BY ARCH	SURFACE	
H2	WALL MOUNTED METAL HALIDE WALL SCONCE COLUMNS	1-M50/C/U/MED		STANZA	5301-WL-20-MH50-277-LBPS-IMS-STD	277	BY ARCH	SURFACE	--
WP1	BUILDING MOUNTED ARCHITECTUAL WALLPACK	1-175W MHG	200	LITHONIA COLUMBIA	WSR175M FT 277 DDB1	277	BRONZE	SURFACE	--
X2A	SINGLE FACE EXIT SIGN W BATTERY BACKUP AND UNIVERSAL MOUNTING	INTEGRAL	3	LITHONIA DUAL LIT	LE-S-W-1-R-120/277 SESOME	277	GREEN ON WHITE	SURFACE	--

NOTES:

1. CATALOG NUMBER REFERS TO FIRST NAME LISTED UNDER MANUFACTURER PER LUMINAIRE TYPE. REMAINING MANUFACTURERS LISTED ARE CONSIDERED EQUIVALENT PRODUCTS FOR THIS PROJECT AND SHALL MEET ALL CRITERIA LISTED INCLUDING THAT CALLED FOR BY THE SPECIFIC LUMINAIRE CATALOG NUMBER. CATALOG NUMBERS DO NOT NECESSARILY REPRESENT COMPLETE CATALOG NUMBERS. ALL ITEMS LISTED IN THE DESCRIPTION SHALL BE PROVIDED.
2. ALL LIGHTING REQUIRING A BALLAST SHALL BE PROVIDED WITH HIGH POWER FACTOR BALLAST.
3. ALL LENSES LISTED AS .125" MINIMUM SHALL BE 9.1 oz/sq ft.
4. PROVIDE QUANTITY OF BALLASTS FOR INDIVIDUAL LUMINAIRES AS REQUIRED TO ACCOMMODATE SWITCHING ARRANGEMENTS AS SHOWN ON THE DRAWINGS.
5. ALL DIMMER BALLASTS SHALL BE LUTRON.

MECHANICAL EQUIPMENT SCHEDULE

KEY	ITEM	MOTORS HP	MOTORS FLA	OTHER WATTS	EQUIV. LB (W)	VOLTAGE VOLTS	PH	WIRES	FEEDER SIZE	°C	PROTECTION BREAKER	DISC. SW.	DISC AT UNIT FUSE	DISC AT UNIT DISC. SW.	DISC AT UNIT FUSE	REMARKS
RTU-1	ROOF TOP UNIT		386.6		321,413	480	3	2 3 #	350 ,1 # 1 G	2 1/2	600 A 3 P					1
FTU	FAN TERMINAL UNIT	1/3		6000	6,859	277	1	1 2 #	8 ,1 # 10 G	1	40 A 1 P					3
CUH-1	CABINET UNIT HEATER			12000	12,000	208	3	1 3 #	8 ,1 # 10 G	1	40 A 3 P					3
CUH-2	CABINET UNIT HEATER			6000	6,000	208	3	1 3 #	12 ,1 # 12 G	3/4	20 A 3 P					3
UH-1	UNIT HEATER			3300	3,300	208	1	1 2 #	12 ,1 # 12 G	3/4	20 A 2 P					3
UH-2	UNIT HEATER			7500	7,500	208	3	1 3 #	10 ,1 # 10 G	3/4	25 A 3 P					3
ELEV-P	PASSENGER ELEVATOR	40			43,232	480	3	1 3 #	2 ,1 # 8 G	1 1/4	90 A 3 P		100 A 3 P	75	4	
ELEV-P	PASSENGER ELEVATOR	40			43,232	480	3	1 3 #	2 ,1 # 8 G	1 1/4	90 A 3 P		100 A 3 P	75	4	
EF-1	EXHAUST FAN – ROOF	5			6,319	480	3	1 3 #	12 ,1 # 12 G	3/4	15 A 3 P		30 A 3 P	10	1	
EF-2	EXHAUST FAN – ELEV MACH RM (ROOF)	1/4			696	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5
EF-3	EXHAUST FAN – 1ST FL ELEC ROOM			233	233	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5
EF-4	EXHAUST FAN – 2ND FL ELEC ROOM			233	233	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5
EF-5	EXHAUST FAN – 3RD FL ELEC ROOM			233	233	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5
PP-1	CIRC PUMP	2/5			864	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5
CWH-1	WATER HEATER	1/3			864	120	1	1 2 #	12 ,1 # 12 G	3/4	20 A 1 P					5

NOTES:

1. VSC (VARIABLE SPEED CONTROLLER) WITH LOCAL DISCONNECT FURNISHED WITH EQUIPMENT.
2. COMBINATION STARTER/DISCONNECT.
3. UNIT PROVIDED WITH INTERNAL DISCONNECTING MEANS.
4. PROVIDE DISCONNECT SWITCH IN NEMA 3R ENCLOSURE.
5. PROVIDE THERMAL OVERLOAD SWITCH.

TRANSFORMER SCHEDULE

KEY (X)	HV FLA	LV FLA	HV PROT (1)	HV PROT (1)	HIGH VOLTAGE FEEDER (3)			LV PROT (2)	LV PROT (2)		LOW VOLTAGE FEEDER (3)			GROUNDING (4)		DIMENSIONS (5)			WEIGHT	BTUH	REMARKS
	480 V	208 V	CCT BRKR	SWITCH	FUSE	CONDUCTORS	°C	CCT BRKR	SWITCH	FUSE	CONDUCTORS	°C	CNDTRS	°C	HIGH	WIDE	DEEP	(S)	OTPT (S)		
T112.5	135.3	312.3	175 A 3 P	200 A 3 P	TRS-R- 175	3 # 2/0 ,1 # 6 G	2	400 A 3 P	400 A 3 P	FRN-R- 400	4 # 500 ,1 # 3 G	3-1/2	1 # 1/0	3/4	42.00	36.00	24.00	1050	14630		

NOTES:

1.) PRIMARY O.C. PROTECTION PER NEC 450-3 (b) (1)
2.) SECONDARY O.C. PROTECTION PER NEC 450-3 (b) (2)
3.) ALL CONDUCTORS ARE COPPER. SEE PLANS FOR INCREASED CONDUCTOR SIZES DUE TO VOLTAGE DROP ETC.
4.) BONDING AND GROUNDING CONDUCTOR PER NEC 250-66-1999
5.) DIMENSIONS, WEIGHTS & BTUH OUTPUT SHOWN ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY FROM MANUFACTURER TO MANUFACTURER.
6.) BRANCH CIRCUITS TO HAVE A DEDICATED NEUTRAL FOR EACH CIRCUIT ON K-RATED TRANSFORMERS.
7.) FOR K-RATED TRANSFORMERS, PROVIDE PARALLEL NEUTRAL CONDUCTORS LUGS AT TRANSFORMERS, LOW VOLTAGE PANELBOARD, DISCONNECTS OR LOAD .

THIS SHEET OF DRAWINGS HAS NOT BEEN REVIEWED FOR ELECTRICAL CODE COMPLIANCE

See revised on
APPROVED ~~APPROVED~~ DEC 20 2005

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CONSTRUCTION DOCUMENTS	26OCT04	

COLORADO REGISTERED PROFESSIONAL ENGINEER
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OCT 26 2004
PROFESSIONAL ENGINEER

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

Health ONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

ELECTRICAL LEGEND AND SCHEDULES

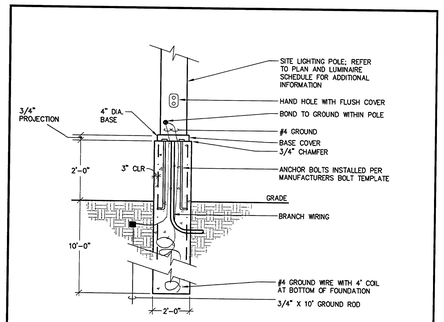
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SHEET NUMBER:

E1.1

D.P.A. PROJECT # 02419.00



POLE BASE DETAIL-RAISED

NO SCALE

1. SEE STRUCTURAL DRAWINGS FOR LOAD CALCULATIONS.

9-8-98 16512.2

EXTERIOR LUMINAIRE SCHEDULE

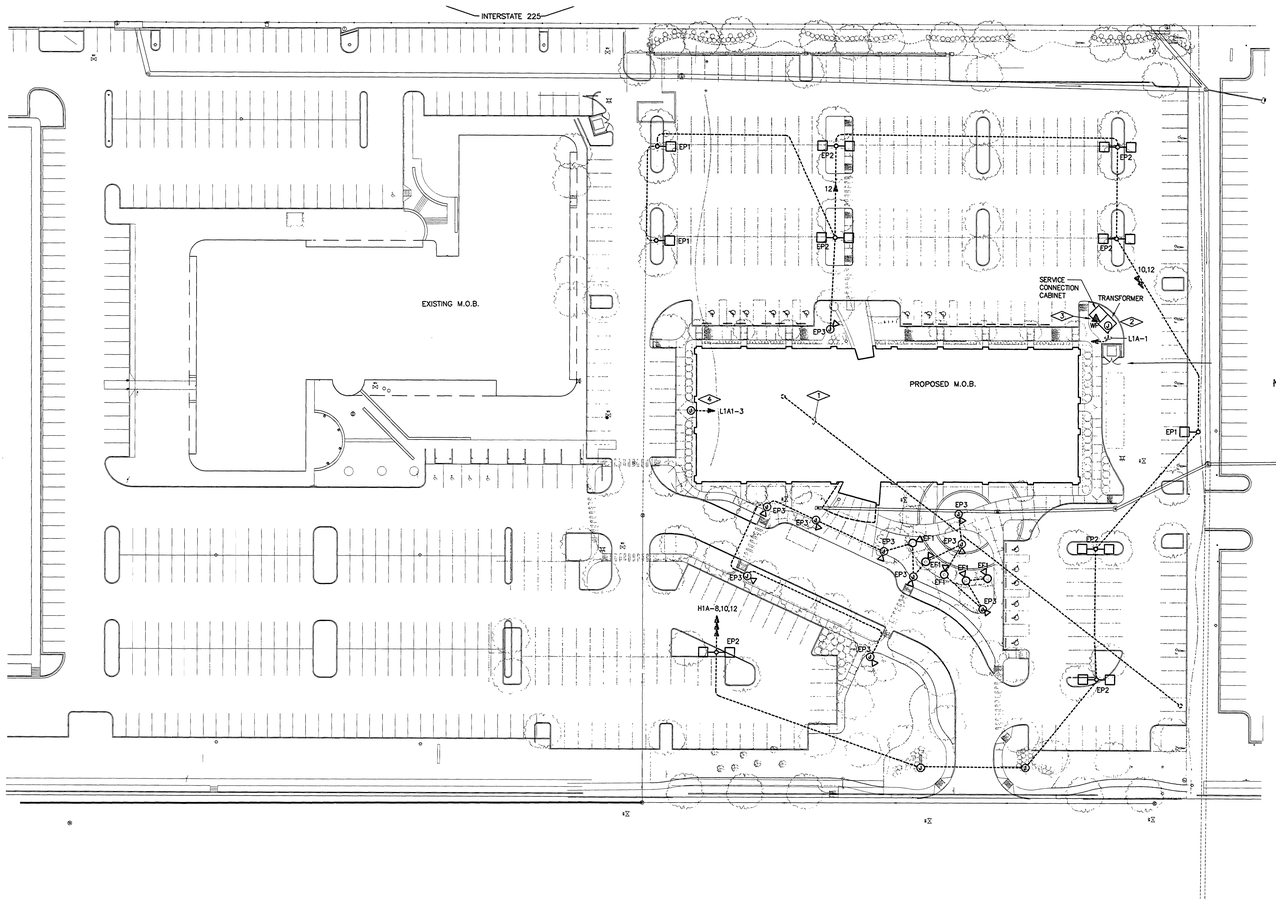
TYPE	DESCRIPTION	LAMPS	VOLT AMPS	MANUFACTURER	CATALOG NO.	VOLTAGE	FINISH	MOUNTING	RECESS
EP1	PARKING LOT LUMINAIRE WITH ONE HEAD AND TYPE III DISTRIBUTION	1 – 400W MH MOGUL BASE	420	KIM	1B/RA253/400M480/BRONZE WITH SAL25-6425OBRONZE POLE	277	BRONZE	25' POLE	
EP2	PARKING LOT LUMINAIRE WITH TWO HEADS	2 – 400W MH MOGUL BASE	820	KIM	2B/RA253/400M480/BRONZE WITH SAL25-6425OBRONZE POLE	277	BRONZE	25' POLE	
EP3	POST MOUNTED ACCENT FLOODS KIM "BELL" SERIES	1–35W MH PAR20	40	KIM	6160/D/35MHvist/GR/PL72	277	BRONZE	37" POLE	

NOTES:

1. CATALOG NUMBER REFERS TO FIRST NAME LISTED UNDER MANUFACTURER PER LUMINAIRE TYPE. REMAINING MANUFACTURERS LISTED ARE CONSIDERED EQUIVALENT PRODUCTS FOR THIS PROJECT AND SHALL MEET ALL CRITERIA LISTED INCLUDING THAT CALLED FOR BY THE SPECIFIC LUMINAIRE CATALOG NUMBER. CATALOG NUMBERS DO NOT NECESSARILY REPRESENT COMPLETE CATALOG NUMBERS. ALL ITEMS LISTED IN THE DESCRIPTION SHALL BE PROVIDED.
2. ALL LIGHTING REQUIRING A BALLAST SHALL BE PROVIDED WITH HIGH POWER FACTOR BALLAST.
3. ALL LENSES LISTED AS .125" MINIMUM SHALL BE 9.1 oz/sq ft.
4. PROVIDE QUANTITY OF BALLASTS FOR INDIVIDUAL LUMINAIRES AS REQUIRED TO ACCOMMODATE SWITCHING ARRANGEMENTS AS SHOWN ON THE DRAWINGS.
5. ALL DIMMER BALLASTS SHALL BE LUTRON.

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. A DETAILED WRITTEN METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY OR AN OUTAGE AFFECTS THE SAFETY OF OCCUPANTS, TELEPHONE/DATA/FIRE ALARM EQUIPMENT OR COMPONENTS OF ANY SYSTEM WHICH SUPPORTS THIS EQUIPMENT OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR SECURITY. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
8. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CATOR, RUMA & ASSOCIATES IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
9. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
10. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.



DETAIL NOTES THIS SHEET:

1. PROVIDE TWO (2)–4" PVC CONDUIT FROM PHONE PEDESTAL TO FIRST FLOOR TELEPHONE ROOM. PROVIDE ONE (1)–2" PVC CONDUIT IN SAME TRENCH FOR CATV.
2. PROVIDE 120V, 20AMP CIRCUIT TO METER BASE.
3. PROVIDE WEATHER PROOF TELEPHONE OUTLET FOR REMOTE METER READING.
4. PROVIDE 20 AMP, 120V CIRCUIT TO IRRIGATION CONTROLLERS AS SHOWN. COORDINATE FINAL LOCATION WITH LANDSCAPE ARCHITECT.

* ELECTRICAL INSTALLATIONS SHALL ALSO COMPLY WITH AURORA ZONING DEPT. APPROVED SITE PLAN PRIOR TO COMMENCEMENT.

ELECTRICAL SITE PLAN

SCALE: 1"=40'-0"

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED
AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted
Date DEC 16 2004
With Attachment

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ISSUE/REVISION	DATE	NO.
DESIGN DEVELOPMENT	17NOV03	
50% CONST. DOCUMENTS	21SEPT04	
95% CONST. DOCUMENTS	08OCT04	
CONSTRUCTION DOCUMENTS	26OCT04	

REGISTERED PROFESSIONAL ENGINEER
JOHN P. DAVIS
19781
OCT 26 2004

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

HealthONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

ELECTRICAL SITE PLAN

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-SITE

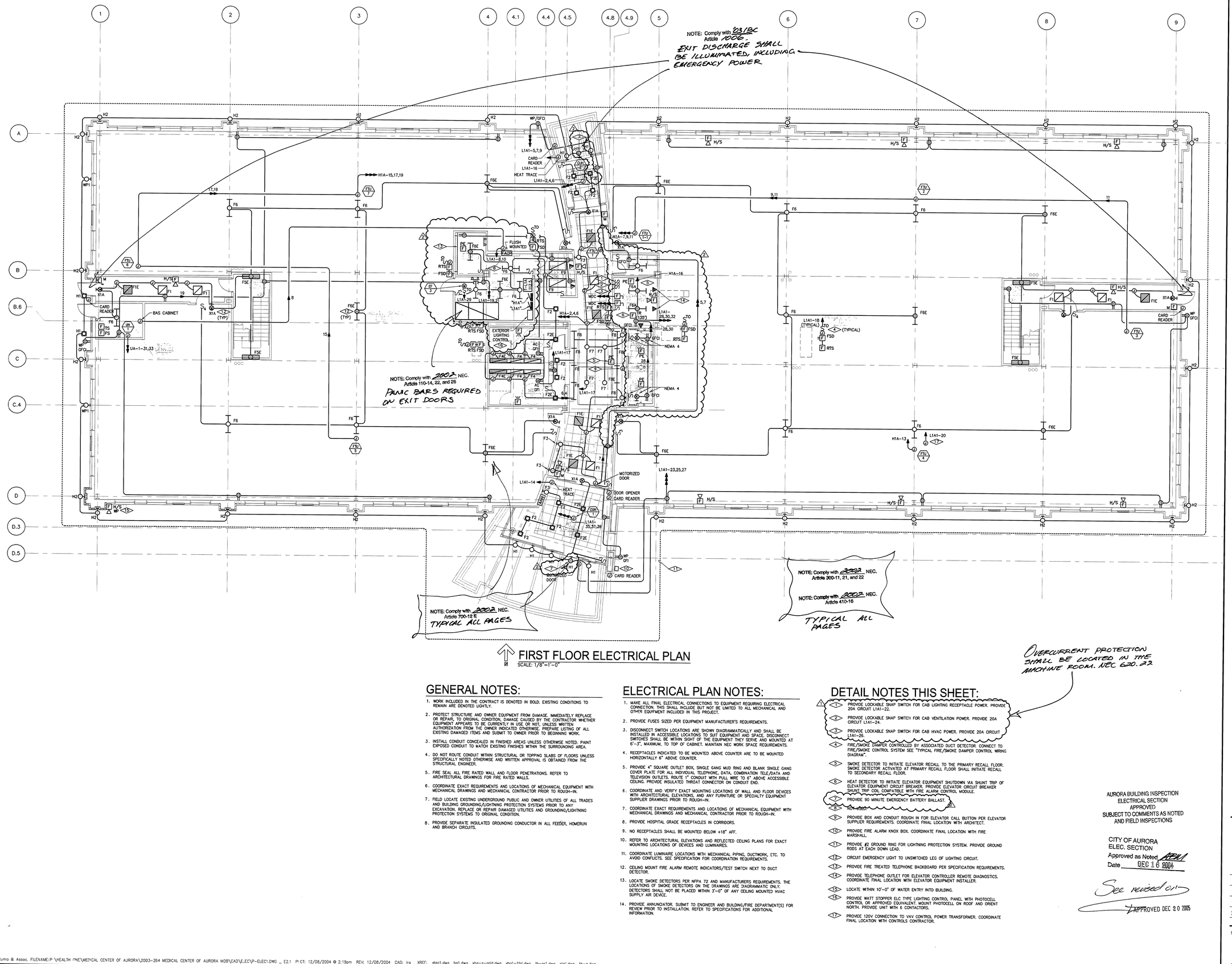
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SHEET NUMBER:

E1.2

D.P.A. PROJECT # 02419.00

Cator, Ruma & Assoc. FILENAME: P:\HEALTH ONE\MEDICAL CENTER OF AURORA\2003-264 MEDICAL CENTER OF AURORA MOB\CAD\ELEC\P-ESITE.DWG _ E1.2 PLOT: 10/26/2004 @ 8:49am REV: 10/26/2004 CAD: JackieH XREF: esite.dwg bgsite.dwg xbgsite-lsurv.dwg xbgsite-spl.dwg tb.dwg



FIRST FLOOR ELECTRICAL PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
8. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

ELECTRICAL PLAN NOTES:

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
2. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
4. RECEPTACLES INDICATED TO BE MOUNTED ABOVE COUNTER ARE TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER.
5. PROVIDE 4" SQUARE OUTLET BOX, SINGLE GANG MUD RING AND BLANK SINGLE GANG COVER PLATE FOR ALL INDIVIDUAL TELEPHONE, DATA, COMBINATION TELE/DATA AND TELEVISION OUTLETS. ROUTE 1" CONDUIT WITH PULL WIRE TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE INSULATED THROAT CONNECTOR ON CONDUIT END.
6. COORDINATE AND VERIFY EXACT MOUNTING LOCATIONS OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS, AND ANY FURNITURE OR SPECIALTY EQUIPMENT SUPPLIER DRAWINGS PRIOR TO ROUGH-IN.
7. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
8. PROVIDE HOSPITAL GRADE RECEPTACLES IN CORRIDORS.
9. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.
10. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT MOUNTING LOCATIONS OF DEVICES AND LUMINAIRES.
11. COORDINATE LUMINAIRE LOCATIONS WITH MECHANICAL PIPING, DUCTWORK, ETC. TO AVOID CONFLICTS. SEE SPECIFICATION FOR COORDINATION REQUIREMENTS.
12. CEILING MOUNT FIRE ALARM REMOTE INDICATORS/TEST SWITCH NEXT TO DUCT DETECTOR.
13. LOCATE SMOKE DETECTORS PER NFPA 72 AND MANUFACTURERS REQUIREMENTS. THE LOCATIONS OF SMOKE DETECTORS ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. DETECTORS SHALL NOT BE PLACED WITHIN 3'-0" OF ANY CEILING MOUNTED HVAC SUPPLY AIR DEVICE.
14. PROVIDE ANNUNCIATOR. SUBMIT TO ENGINEER AND BUILDING/FIRE DEPARTMENT(S) FOR REVIEW PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DETAIL NOTES THIS SHEET:

Overcurrent protection shall be located in the machine room. NEC 620.22

1. PROVIDE LOCKABLE SNAP SWITCH FOR CAB LIGHTING RECEPTACLE POWER. PROVIDE 20A CIRCUIT L1A1-22.
2. PROVIDE LOCKABLE SNAP SWITCH FOR CAB VENTILATION POWER. PROVIDE 20A CIRCUIT L1A1-24.
3. PROVIDE LOCKABLE SNAP SWITCH FOR CAB HVAC POWER. PROVIDE 20A CIRCUIT L1A1-26.
4. FIRE/SMOKE DAMPER CONTROLLED BY ASSOCIATED DUCT DETECTOR. CONNECT TO FIRE/SMOKE CONTROL SYSTEM SEE "TYPICAL FIRE/SMOKE DAMPER CONTROL WIRING DIAGRAM".
5. SMOKE DETECTOR TO INITIATE ELEVATOR RECALL TO THE PRIMARY RECALL FLOOR. SMOKE DETECTOR ACTIVATED AT PRIMARY RECALL FLOOR SHALL INITIATE RECALL TO SECONDARY RECALL FLOOR.
6. HEAT DETECTOR TO INITIATE ELEVATOR EQUIPMENT SHUTDOWN VIA SHUNT TRIP OF ELEVATOR EQUIPMENT CIRCUIT BREAKER. PROVIDE ELEVATOR CIRCUIT BREAKER SHUNT TRIP COIL COMPATIBLE WITH FIRE ALARM CONTROL MODULE.
7. PROVIDE 90 MINUTE EMERGENCY BATTERY BALLAST.
8. NOT USED
9. PROVIDE BOX AND CONDUIT ROUGH IN FOR ELEVATOR CALL BUTTON PER ELEVATOR SUPPLIER REQUIREMENTS. COORDINATE FINAL LOCATION WITH ARCHITECT.
10. PROVIDE FIRE ALARM KNOX BOX. COORDINATE FINAL LOCATION WITH FIRE MARSHALL.
11. PROVIDE #2 GROUND RING FOR LIGHTNING PROTECTION SYSTEM. PROVIDE GROUND RODS AT EACH DOWN LEAD.
12. CIRCUIT EMERGENCY LIGHT TO UNSWITCHED LEG OF LIGHTING CIRCUIT.
13. PROVIDE FIRE TREATED TELEPHONE BACKBOARD PER SPECIFICATION REQUIREMENTS.
14. PROVIDE TELEPHONE OUTLET FOR ELEVATOR CONTROLLER REMOTE DIAGNOSTICS. COORDINATE FINAL LOCATION WITH ELEVATOR EQUIPMENT INSTALLER.
15. LOCATE WITHIN 10'-0" OF WATER ENTRY INTO BUILDING.
16. PROVIDE WATT STOPPER ELC TYPE LIGHTING CONTROL PANEL WITH PHOTOCELL CONTROL OR APPROVED EQUIVALENT. MOUNT PHOTOCELL ON ROOF AND ORIENT NORTH. PROVIDE UNIT WITH 6 CONTACTORS.
17. PROVIDE 120V CONNECTION TO VAV CONTROL POWER TRANSFORMER. COORDINATE FINAL LOCATION WITH CONTROLS CONTRACTOR.

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted ABM
Date DEC 16 2004

See revised on APPROVED DEC 20 2005

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ISSUE/REVISION	DATE	NO.
DESIGN DEVELOPMENT	17NOV03	
50% CONST. DOCUMENTS	21SEPT04	
95% CONST. DOCUMENTS	08OCT04	
CONSTRUCTION DOCUMENTS	26OCT04	
ADDENDUM #1	11NOV04	1
PROPOSAL REQUEST #1	08DEC04	2

COLORADO REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. CATOR
NUMBER 19781
DEC 9 2004

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

MEDICAL OFFICE BUILDING

Health ONE

RECEIVED
DEC 10 2004
CALCON

PROPOSAL REQUEST #1

FIRST FLOOR ELECTRICAL PLAN

DATE	8 DEC 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-ELEC1

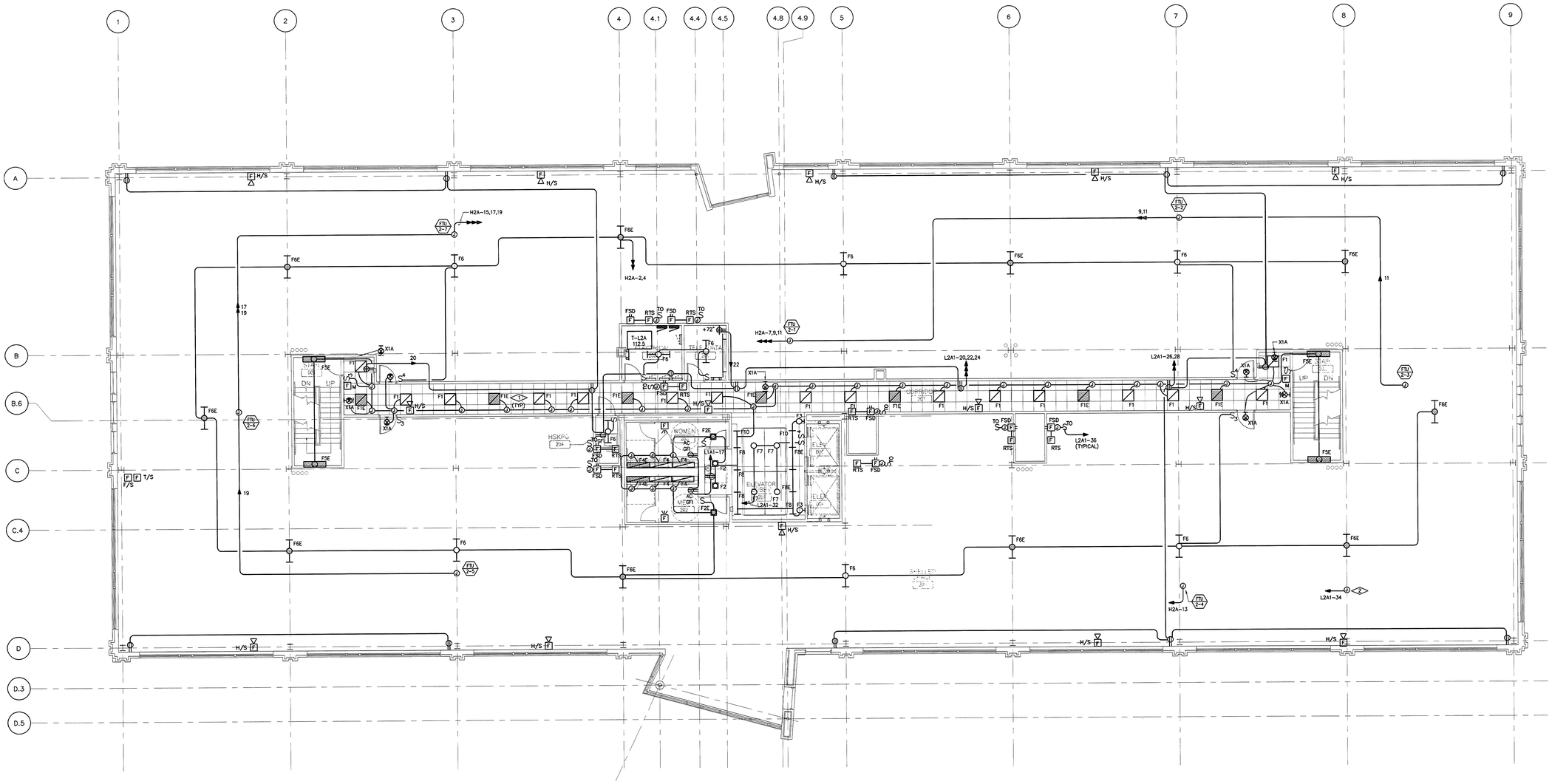
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SHEET NUMBER:

E2.1

D.P.A. PROJECT # 02419.00

Cator, Ruma & Assoc. FILENAME:P:\HEALTH ONE\MEDICAL CENTER OF AURORA\2003-264 MEDICAL CENTER OF AURORA MOB\CAD\ELEC\P-ELEC1.DWG _ E2.1 PLOT: 12/08/2004 @ 2:19pm REV: 12/08/2004 CAD: ira XREF: elec1.dwg bg1.dwg xbg-s-grid.dwg xbg1-1fpl.dwg tb-pr1.dwg clg1.dwg tb-a.dwg



SECOND FLOOR ELECTRICAL PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
8. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

ELECTRICAL PLAN NOTES:

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQYIPMENT INCLUDED IN THIS PROJECT.
2. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
4. RECEPTACLES INDICATED TO BE MOUNTED ABOVE COUNTER ARE TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER.
5. PROVIDE 4" SQUARE OUTLET BOX, SINGLE GANG MUD RING AND BLANK SINGLE GANG COVER PLATE FOR ALL INDIVIDUAL TELEPHONE, DATA, COMBINATION TELE/DATA AND TELEVISION OUTLETS. ROUTE 3/4" CONDUIT WITH PULL WIRE TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE INSULATED THROAT CONNECTOR ON CONDUIT END.
6. COORDINATE AND VERIFY EXACT MOUNTING LOCATIONS OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS, AND ANY FURNITURE OR SPECIALTY EQUIPMENT SUPPLIER DRAWINGS PRIOR TO ROUGH-IN.
7. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
8. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.
9. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT MOUNTING LOCATIONS OF DEVICES AND LUMINAIRES.
10. COORDINATE LUMINAIRE LOCATIONS WITH MECHANICAL PIPING, DUCTWORK, ETC. TO AVOID CONFLICTS. SEE SPECIFICATION FOR COORDINATION REQUIREMENTS.
11. CEILING MOUNT FIRE ALARM REMOTE INDICATORS/TEST SWITCH NEXT TO DUCT DETECTOR.
12. LOCATE SMOKE DETECTORS PER NFPA 72 AND MANUFACTURERS REQUIREMENTS. THE LOCATIONS OF SMOKE DETECTORS ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. DETECTORS SHALL NOT BE PLACED WITHIN 3'-0" OF ANY CEILING MOUNTED HVAC SUPPLY AIR DEVICE.
13. PROVIDE ANNUNCIATOR. SUBMIT TO ENGINEER AND BUILDING/FIRE DEPARTMENT(S) FOR REVIEW PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DETAIL NOTES THIS SHEET:

<1> CIRCUIT EMERGENCY LIGHT TO UNSWITCHED LEG OF LIGHTING CIRCUIT.

<2> PROVIDE 120V CONNECTION TO VAV CONTROL POWER TRANSFORMER. COORDINATE FINAL LOCATION WITH CONTROLS CONTRACTOR.

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED
AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted ABM
Date DEC 16 2004

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ISSUE/REVISION	DATE	NO.
DESIGN DEVELOPMENT	17NOV03	
50% CONST. DOCUMENTS	21SEPT04	
95% CONST. DOCUMENTS	08OCT04	
CONSTRUCTION DOCUMENTS	26OCT04	

COLORADO REGISTERED
CHRISTOPHER A. BUSH
19781
OCT 26 2004
PROFESSIONAL ENGINEER

MEDICAL CENTER
OF AURORA SOUTH
AURORA, COLORADO

HealthONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

SECOND FLOOR
ELECTRICAL PLAN

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-ELEC2

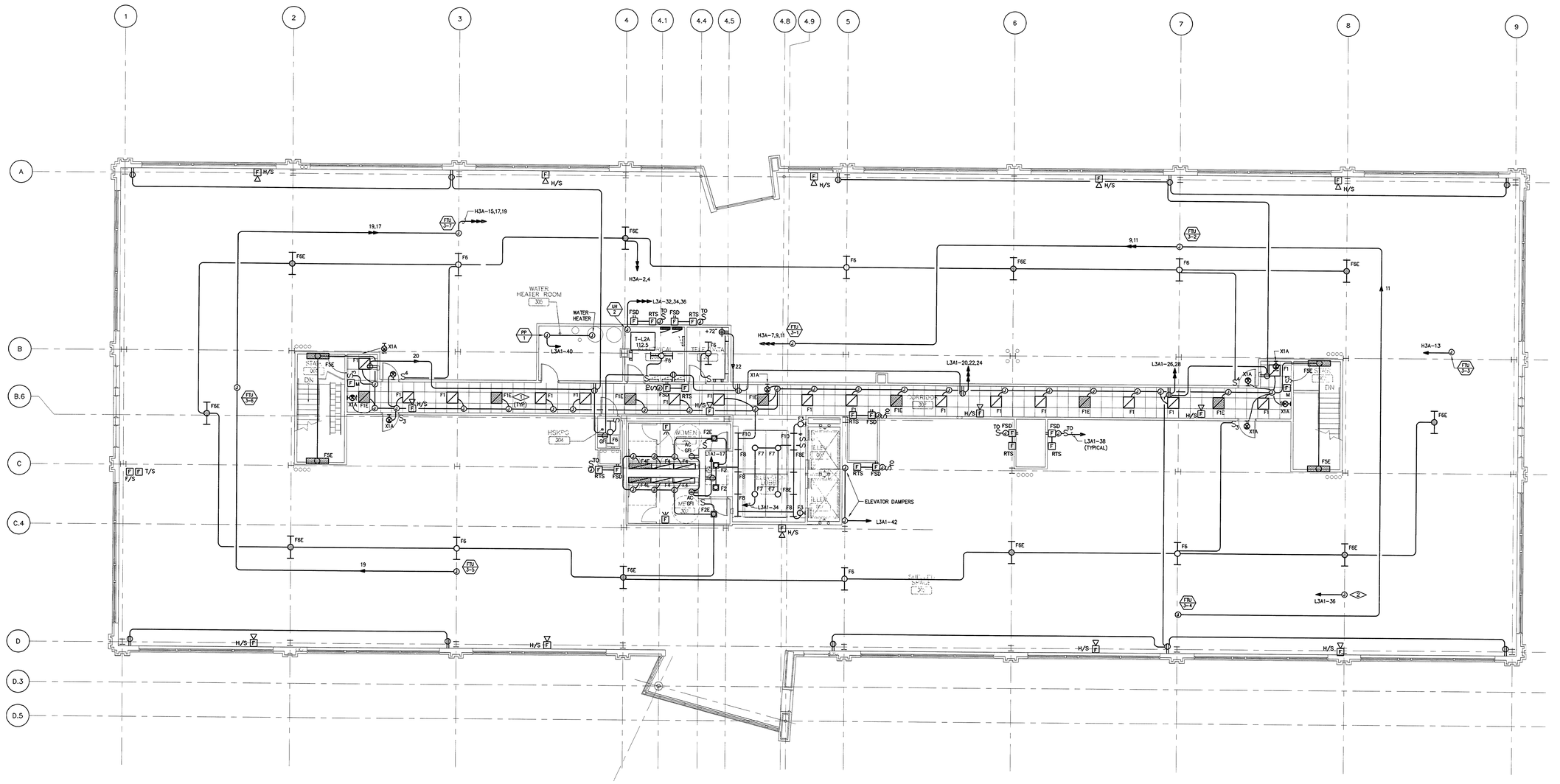
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SHEET NUMBER:

E2.2

D.P.A. PROJECT # 02419.00

Cator, Ruma & Assoc. FILENAME:P:\HEALTH ONE\MEDICAL CENTER OF AURORA\2003-264 MEDICA. CENTER OF AURORA MOB\CAD\ELEC\P-ELEC2.DWG _ E2.2 PLOT: 10/26/2004 @ 12.04pm REV: 10/26/2004 CAD. Jackieh XREF: tb.dwg elec2.dwg bg2.dwg xbg-s-grid.dwg xbg2-2fpl.dwg clg2.dwg



THIRD FLOOR ELECTRICAL PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
8. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

ELECTRICAL PLAN NOTES:

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
2. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
4. RECEPTACLES INDICATED TO BE MOUNTED ABOVE COUNTER ARE TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER.
5. PROVIDE 4" SQUARE OUTLET BOX, SINGLE GANG MUD RING AND BLANK SINGLE GANG COVER PLATE FOR ALL INDIVIDUAL TELEPHONE, DATA, COMBINATION TELE/DATA AND TELEVISION OUTLETS. ROUTE 3/4" CONDUIT WITH PULL WIRE TO 6" ABOVE ACCESSIBLE CEILING. PROVIDE INSULATED THROAT CONNECTOR ON CONDUIT END.
6. COORDINATE AND VERIFY EXACT MOUNTING LOCATIONS OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS, AND ANY FURNITURE OR SPECIALTY EQUIPMENT SUPPLIER DRAWINGS PRIOR TO ROUGH-IN.
7. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
8. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.
9. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT MOUNTING LOCATIONS OF DEVICES AND LUMINAIRES.
10. COORDINATE LUMINAIRE LOCATIONS WITH MECHANICAL PIPING, DUCTWORK, ETC. TO AVOID CONFLICTS. SEE SPECIFICATION FOR COORDINATION REQUIREMENTS.
11. CEILING MOUNT FIRE ALARM REMOTE INDICATORS/TEST SWITCH NEXT TO DUCT DETECTOR.
12. LOCATE SMOKE DETECTORS PER NFPA 72 AND MANUFACTURERS REQUIREMENTS. THE LOCATIONS OF SMOKE DETECTORS ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. DETECTORS SHALL NOT BE PLACED WITHIN 3'-0" OF ANY CEILING MOUNTED HVAC SUPPLY AIR DEVICE.
13. PROVIDE ANNUNCIATOR, SUBMIT TO ENGINEER AND BUILDING/FIRE DEPARTMENT(S) FOR REVIEW PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

DETAIL NOTES THIS SHEET:

<1> CIRCUIT EMERGENCY LIGHT TO UNSWITCHED LEG OF LIGHTING CIRCUIT.

<2> PROVIDE 120V CONNECTION TO VAV CONTROL POWER TRANSFORMER. COORDINATE FINAL LOCATION WITH CONTROLS CONTRACTOR.

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED
AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted
Date DEC 16 2004

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ISSUE/REVISION	DATE	NO.
DESIGN DEVELOPMENT	17NOV03	
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CONSTRUCTION DOCUMENTS	26OCT04	

COLORADO REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER A. BUGNO
19781
OCT 26 2004

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

Health ONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

THIRD FLOOR ELECTRICAL PLAN

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-ELEC3

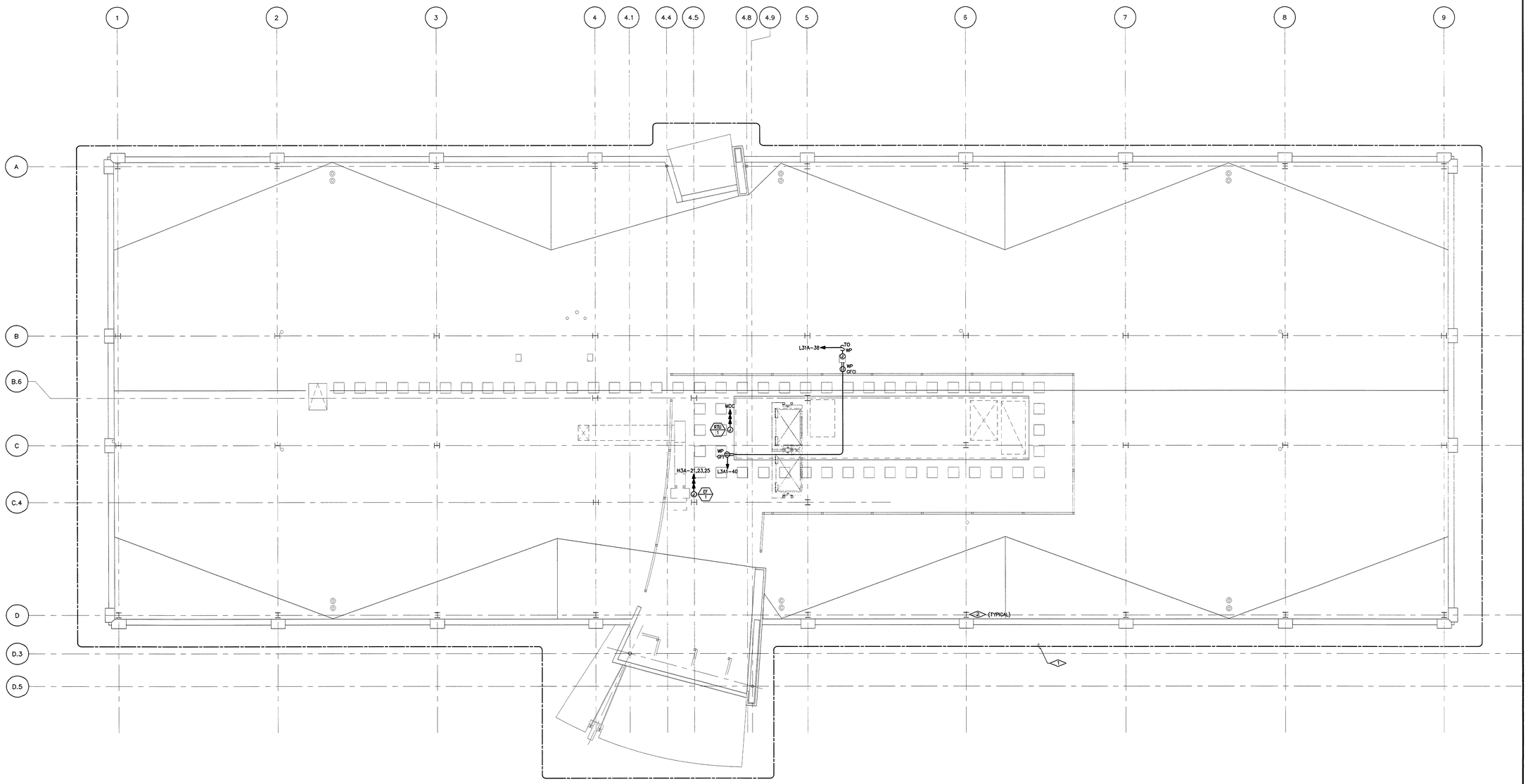
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SHEET NUMBER:

E2.3

D.P.A. PROJECT # 02419.00

Cator, Ruma & Assoc. FILENAME:P:\HEALTH ONE\MEDICAL CENTER OF AURORA\2003-264 MEDICAL CENTER OF AURORA MOB\CAD\ELEC\P-ELEC3.DWG _ E2.3 PLOT: 10/26/2004 @ 12.03pm REV: 10/26/2004 CAD: Jackieh XREF: tb.dwg elec3.dwg xbg-s-grid.dwg clg2.dwg bg3.dwg xbg3-3fpl.dwg



ROOF ELECTRICAL PLAN

SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CATOR, RUMA & ASSOCIATES IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
8. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
9. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

ELECTRICAL PLAN NOTES:

1. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ALL MECHANICAL AND OTHER EQUIPMENT INCLUDED IN THIS PROJECT.
2. PROVIDE FUSES SIZED PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
3. DISCONNECT SWITCH LOCATIONS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO SUIT EQUIPMENT AND SPACE. DISCONNECT SWITCHES SHALL BE WITHIN SIGHT OF THE EQUIPMENT THEY SERVE AND MOUNTED AT 6'-3", MAXIMUM, TO TOP OF CABINET. MAINTAIN NEC WORK SPACE REQUIREMENTS.
4. RECEPTACLES INDICATED TO BE MOUNTED ABOVE COUNTER ARE TO BE MOUNTED HORIZONTALLY 6" ABOVE COUNTER.
5. COORDINATE AND VERIFY EXACT MOUNTING LOCATIONS OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS, AND ANY FURNITURE OR SPECIALTY EQUIPMENT SUPPLIER DRAWINGS PRIOR TO ROUGH-IN.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. PROVIDE HOSPITAL GRADE RECEPTACLES IN PATIENT CARE AREAS AS DEFINED IN NEC 517-3.
8. NO RECEPTACLES SHALL BE MOUNTED BELOW +18" AFF.

DETAIL NOTES THIS SHEET:

<1> PROVIDE CLASS II LIGHTNING PROTECTION SYSTEM. SEE SPECIFICATIONS FOR REQUIREMENTS. PROVIDE UL MASTER LABEL FOR INSTALLATION.

<2> PROVIDE 1" SCHEDULE 40 PVC CONDUIT TO ROUTE DOWN LEADS THROUGH INTERIOR OF BUILDING.

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED
AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted ABM
Date DEC 16 2004

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COLORADO REGISTERED JOHN P. HUGHES 29781 PROFESSIONAL ENGINEER OCT 26 2004

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

Health ONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

FOURTH FLOOR ELECTRICAL PLAN

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-ELEC4

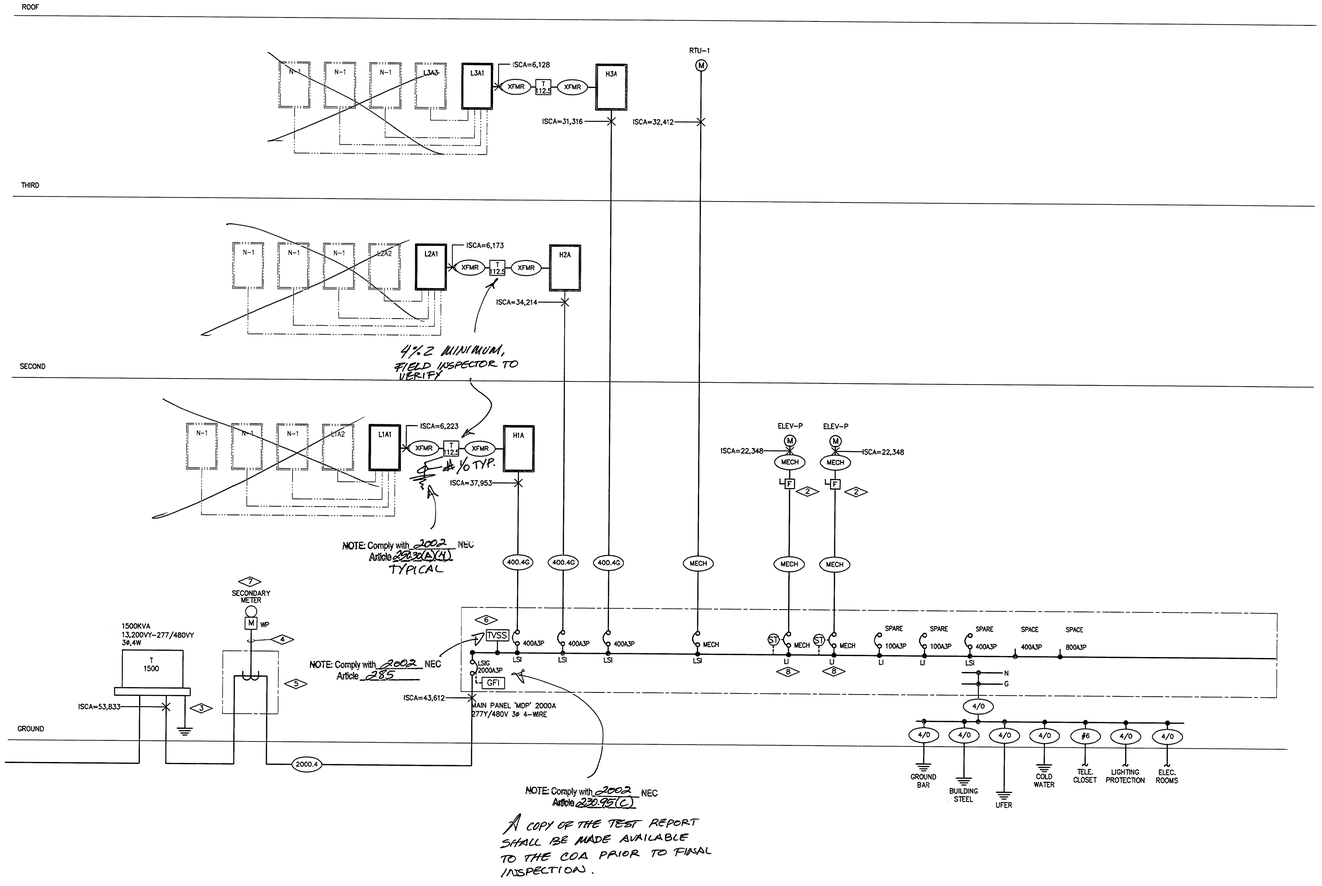
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SHEET NUMBER:

E2.4

D.P.A. PROJECT # 02419.00

Cator, Ruma & Assoc. FILENAME: P:\HEALTH ONE\MEDICAL CENTER OF AURORA\2003-264 MEDICAL CENTER OF AURORA MOB\CAD\ELEC\P-ELECR.DWG _ E2.4 PLOT: 10/26/2004 @ 9:03am REV. 10/25/2004 CAD: JackieH XREF: tb.dwg elecr.dwg bgr.dwg xbg-s-grid.dwg xbgr-4fpl.dwg



NOTE: Comply with 2002 NEC Article 110.9 & 240.41

NOTE: Comply with 2002 NEC. Articles 110-14, 22, and 26

NOTE: Comply with 2002 NEC Article 409

GENERAL NOTES:

1. WORK INCLUDED IN THE CONTRACT IS DENOTED IN BOLD. EXISTING CONDITIONS TO REMAIN ARE DENOTED LIGHTLY.
2. PROTECT STRUCTURE AND OWNER EQUIPMENT FROM DAMAGE. IMMEDIATELY REPLACE OR REPAIR, TO ORIGINAL CONDITION, DAMAGE CAUSED BY THE CONTRACTOR WHETHER EQUIPMENT APPEARS TO BE CURRENTLY IN USE OR NOT, UNLESS WRITTEN AUTHORIZATION FROM THE OWNER INDICATED OTHERWISE. PREPARE LISTING OF ALL EXISTING DAMAGED ITEMS AND SUBMIT TO OWNER PRIOR TO BEGINNING WORK.
3. INSTALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED. PAINT EXPOSED CONDUIT TO MATCH EXISTING FINISHES WITHIN THE SURROUNDING AREA.
4. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND WRITTEN APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.
5. FIRE SEAL ALL FIRE RATED WALL AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
6. COORDINATE EXACT REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
7. A DETAILED WRITTEN METHOD OF PROCEDURE IS REQUIRED WHEN A CONSTRUCTION ACTIVITY OR AN OUTAGE AFFECTS THE SAFETY OF OCCUPANTS, TELEPHONE/DATA/FIRE ALARM EQUIPMENT OR COMPONENTS OF ANY SYSTEM WHICH SUPPORTS THIS EQUIPMENT OR ESSENTIALLY AFFECTS THE BUILDING MANAGEMENT, OPERATIONS OR SECURITY. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
8. EXISTING INFORMATION SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM OWNER FURNISHED DRAWINGS AND/OR LIMITED FIELD OBSERVATIONS. CATOR, RUMA & ASSOCIATES IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION OR THE ADEQUACY, SAFETY AND CONFORMANCE TO CURRENT PREVAILING CODES OF ANY WORK SHOWN AS EXISTING ON THESE DRAWINGS.
9. FIELD LOCATE EXISTING UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND BUILDING GROUNDING/LIGHTNING PROTECTION SYSTEMS PRIOR TO ANY EXCAVATION. REPLACE OR REPAIR DAMAGED UTILITIES AND GROUNDING/LIGHTNING PROTECTION SYSTEMS TO ORIGINAL CONDITION.
10. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER, HOMERUN AND BRANCH CIRCUITS.

ONE-LINE DIAGRAM NOTES:

1. PANELBOARDS INDICATED ON ONE LINE DIAGRAMS DO NOT SHOW ALL BRANCH CIRCUITS. REFER TO PANELBOARD SCHEDULE(S).
2.

DETAIL NOTES THIS SHEET:

1. NOT USED.
2. PROVIDE FUSED DISCONNECT IN NEMA 4 ENCLOSURE.
3. PROVIDE TRANSFORMER/CONNECTION CABINET, PAD AND PAD PREPARATION.
4. PROVIDE CONDUIT AND WIRE AS REQUIRED BY UTILITY COMPANY.
5. PROVIDE SERVICE CONNECTION CABINET AS REQUIRED BY UTILITY COMPANY.
6. PROVIDE SEPARATE LINE ITEM PRICING FOR TVSS.
7. PROVIDE METER BASE AS REQUIRED BY UTILITY COMPANY.
8. PROVIDE SHUNT TRIP CIRCUIT BREAKERS FOR ELEVATOR FEEDERS. PROVIDE SHUNT TRIP COIL COMPATIBLE WITH FIRE ALARM SYSTEM CONTROL MODULE.

FEEDER SCHEDULE

KEY	CONDUCTORS	%
100.4 G	4 # 1 , 1 # 8 G	1 1/2
400.4 G	4 # 500 , 1 # 3 G	3 1/2
2000.4 G 6	[4 # 500 , 1 # 250 G	3 1/2]
MEC	SEE MECH'L EQUIPMENT SCHEDULE	
XFMR	SEE TRANSFORMER SCHEDULE	

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted ADW
Date DEC 16 2004

With 30 pages attachment only.

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CONSTRUCTION DOCUMENTS	26OCT04	

COLORADO REGISTERED JOHN P. HUDSPETH 19781 10/26/04 PROFESSIONAL ENGINEER

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

HealthONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

ELECTRICAL ONE-LINE DIAGRAM

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-1LINE

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SHEET NUMBER:

E3.1

D.P.A. PROJECT # 02419.00

NEW MDC "MDP"

2000 A M.L.O.
2000 A BUS
65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

VOLTAGE 277 / 480 V
PHASE 3 PH
WIRE 4 W

MDC Notes:

DESCRIPTION OF SUB-LOAD OR PANEL	CONNECTED LOADS (IN VA) BY CATEGORY AND PHASE													REMARKS
	LIGHTING RECEPTACLES PH A	PH B	PH C	MOTORS PH A	PH B	PH C	PH A	PH B	PH C	LARGEST	OTHER PH A	PH B	PH C	
"H1A"	5908	7036	5890	1980	2700	2160	1500	1500	859	29706	21727	19717		400
"H2A"	3654	1750	0	1620	900	0	0	395	395	20576	1497	1317		400
"H3A"	0	300	0	1620	900	900	2501	3714	2838	2106	20576	1317	14917	400
RTU-1							107138	107138	107138	26573				600
ELEV-P							14411	14411	14411	14411				90
ELEV-P							14411	14411	14411	14411				90
SPARE														100
SPARE														100
SPACE														400
SPACE														400
SPACE														800

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	9,562	9,086	5,890
RECEPTACLES	5,220	4,500	3,060
MOTORS	139,960	141,173	140,051
OTHER	70,858	50,362	48,352
TOTAL	225,601	205,121	197,353
PHASE BALANCE	A–B	B–C	C–A
	10%	4%	14%

LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	24.5	KVA x 125% =	30.7 KVA	x 95% =	29.1	KW
RECEPTACLES						
FIRST 10 KVA	10.0	KVA x 100% =	10.0 KVA	x 100% =	10.0	KW
REMAINDER	2.8	KVA x 50% =	1.4 KVA	x 100% =	1.4	KW
MOTORS						
LARGEST	79.7	KVA x 125% =	99.6 KVA	x 90% =	89.7	KW
REMAINDER	340.2	KVA x 100% =	340.2 KVA	x 90% =	306.1	KW
OTHER	169.6	KVA x 125% =	212.0 KVA	x 100% =	212.0	KW
TOTAL	626.8	KVA	693.8 KVA		648.3	KW

CONNECTED PF= 93%
CONNECTED
AMPACITY = 753.9
NEC DEMAND
AMPACITY = 834.6

NEW PANEL "H3A"

Panel Notes:

400 A M.L.O.

VOLTAGE 277 / 480 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	XFMR T-L3A	0	1,620	395	0	2015	XFMR /	1	A	2	20 /1	0						
	"	300	900	1508	0	2808	/	3	B	4	20 /1	0						
	"	0	900	732	1200	2832	/3	5	C	6	20 /1	0						
	FTU-3-1				6859	6859	40 /1	7	A	8	20 /1	0						
	FTU-3-2				6859	6859	40 /1	9	B	10	20 /1	0						
	FTU-3-3				6859	6859	40 /1	11	C	12	20 /1	0						
	FTU-3-4				6859	6859	40 /1	13	A	14	20 /1	0						
	FTU-3-5				6859	6859	40 /1	15	B	16	20 /1	0						
	FTU-3-6				6859	6859	40 /1	17	C	18	20 /1	0						
	FTU-3-7				6859	6859	40 /1	19	A	20	20 /1	0						
	EF-1			2106		2106	15 /	21	B	22	20 /1	0						
	"			2106		2106	/	23	C	24	20 /1	0						
	"			2106		2106	/3	25	A	26	20 /1	0						
						0	20 /1	27	B	28	20 /1	0						
						0	20 /1	29	C	30	20 /1	0						
						0	20 /1	31	A	32	20 /1	0						
						0	20 /1	33	B	34	20 /1	0						
						0	20 /1	35	C	36	20 /1	0						
						0	20 /1	37	A	38	20 /1	0						
						0	20 /1	39	B	40	20 /1	0						
						0	20 /1	41	C	42	20 /1	0						

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	0	300	0
RECEPTACLES	1,620	900	900
MOTORS	2,501	3,714	2,838
OTHER	20,576	13,717	14,917
TOTAL	24,697	18,632	18,656
PHASE BALANCE	A–B	B–C	C–A
	33%	0%	32%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	0.3 KVA	x 125% =	0.4 KVA	x 95% =	0.3	KW
RECEPTACLES						
FIRST 10 KVA	3.4 KVA	x 100% =	3.4 KVA	x 100% =	3.4	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	6.3 KVA	x 125% =	7.9 KVA	x 90% =	5.7	KW
REMAINDER	2.7 KVA	x 100% =	2.7 KVA	x 90% =	2.5	KW
OTHER	49.2 KVA	x 125% =	61.5 KVA	x 100% =	49.2	KW
TOTAL	62.0 KVA		75.9 KVA		61.1	KW

PANEL CONNECTED PF= 99%
CONNECTED
AMPACITY = 74.6
NEC DEMAND
AMPACITY = 91.3

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = GFCI
** = SHUNT TRIP

NEW PANEL "L3A1"

Panel Notes:

400 A MAIN CIRCUIT BREAKER

VOLTAGE 120 / 208 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	SPARE				0	225	/	1	A	2	225 /	0					SPARE	
	"				0		/	3	B	4	/	0					"	
	"				0		/3	5	C	6	/3	0					"	
	SPARE				0	225	/	7	A	8	225 /	0					SPARE	
	"				0		/	9	B	10	/	0					"	
	"				0		/3	11	C	12	/3	0					"	
					0	20	/1	13	A	14	225 /	0					SPARE	
					0	20	/1	15	B	16	/	0					"	
					0	20	/1	17	C	18	/3	0					"	
					0	20	/1	19	A	20	20 /1	900			900		N REC	
					0	20	/1	21	B	22	20 /1	180			180		IT ROOM	
					0	20	/1	23	C	24	20 /1	900			900		CENTRAL REC	
					0	20	/1	25	A	26	20 /1	720			720		S REC	
					0	20	/1	27	B	28	20 /1	720			720		S REC	
					0	20	/1	29	C	30	20 /1	696		696			EF-2	
					0	20	/1	31	A	32	20 /1	233		233			EF-5	
					0	20	/1	33	B	34	20 /1	300				300	ELEV LOBBY	
					0	20	/1	35	C	36	20 /1	1200	1200				VAV CONTROL XFMR	
					0	20	/1	37	A	38	20 /1	162		162			F/S DAMPERS	
					0	20	/1	39	B	40	20 /1	1608		1608			pp-1 and Water Heater	
					0	20	/1	41	C	42	20 /1	36		36			ELEV SHAFT DAMPERS	

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	0	300	0
RECEPTACLES	1,620	900	900
MOTORS	395	1,608	732
OTHER	0	0	1,200
TOTAL	2,015	2,808	2,832
PHASE BALANCE	A–B	B–C	C–A
	39%	11%	41%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	0.3 KVA	x 125% =	0.4 KVA	x 95% =	0.3	KW
RECEPTACLES						
FIRST 10 KVA	3.4 KVA	x 100% =	3.4 KVA	x 100% =	3.4	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	1.6 KVA	x 125% =	2.0 KVA	x 90% =	1.4	KW
REMAINDER	1.1 KVA	x 100% =	1.1 KVA	x 90% =	1.0	KW
OTHER	1.2 KVA	x 125% =	1.5 KVA	x 100% =	1.2	KW
TOTAL	7.7 KVA		8.4 KVA		7.4	KW

PANEL CONNECTED PF= 96%
CONNECTED
AMPACITY = 21.2
NEC DEMAND
AMPACITY = 23.4

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = GFCI
** = SHUNT TRIP

NEW PANEL "H1A"

Panel Notes: 1. CIRCUIT VIA EXTERIOR LIGHTING CONTROL CABINET

400 A M.L.O.
65,000

VOLTAGE 277 / 480 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	XFMR T-L1A	0	1980	1500	9130	12610	XFMR /	1	A	2	20 /1	2310				2310	CORR. LTS	
	"	100	2700	1500	8010	12310	/	3	B	4	20 /1	3476				3476	SHELL LTS	
	"	300	2160	859	6000	9319	/3	5	C	6	20 /1	3910				3910	EXT SIGNICES	1
	FTU-1-1				6859	6859	40 /1	7	A	8	20 /1	3078				3078	PARKING LTS	1
	FTU-1-2				6859	6859	40 /1	9	B	10	20 /1	3460				3460	PARKING LTS	1
	FTU-1-3				6859	6859	40 /1	11	C	12	20 /1	1680				1680	PARKING LTS	1
	FTU-1-4				6859	6859	40 /1	13	A	14	20 /1	520				520	LAMPPOST LTS	1
	FTU-1-5				6859	6859	40 /1	15	B	16	20 /1	140				140	ELEVATOR MECH RM	
	FTU-1-6				6859	6859	40 /1	17	C	18	20 /1	0						
	FTU-1-7				6859	6859	40 /1	19	A	20	20 /1	0						
						0	20 /1	21	B	22	20 /1	0						
						0	20 /1	23	C	24	20 /1	0						
						0	20 /1	25	A	26	20 /1	0						
						0	20 /1	27	B	28	20 /1	0						
						0	20 /1	29	C	30	20 /1	0						
						0	20 /1	31	A	32	20 /1	0						
						0	20 /1	33	B	34	20 /1	0						
						0	20 /1	35	C	36	20 /1	0						
						0	20 /1	37	A	38	20 /1	0						
						0	20 /1	39	B	40	20 /1	0						
						0	20 /1	41	C	42	20 /1	0						

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	5,908	7,176	5,890
RECEPTACLES	1,980	2,700	2,160
MOTORS	1,500	1,500	859
OTHER	29,706	21,727	19,717
TOTAL	39,094	33,103	28,626
PHASE BALANCE	A–B	B–C	C–A
	18%	16%	37%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	19.0 KVA	x 125% =	23.7 KVA	x 95% =	18.0	KW
RECEPTACLES						
FIRST 10 KVA	6.8 KVA	x 100% =	6.8 KVA	x 100% =	6.8	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	2.6 KVA	x 125% =	3.2 KVA	x 90% =	2.3	KW
REMAINDER	1.3 KVA	x 100% =	1.3 KVA	x 90% =	1.2	KW
OTHER	71.2 KVA	x 125% =	88.9 KVA	x 100% =	71.2	KW
TOTAL	100.8 KVA		124.0 KVA		99.5	KW

PANEL CONNECTED PF= 99%
CONNECTED
AMPACITY = 121.3
NEC DEMAND
AMPACITY = 149.1

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = GFCI
** = SHUNT TRIP

NEW PANEL "L1A1"

Panel Notes:

400 A MAIN CIRCUIT BREAKER

VOLTAGE 120 / 208 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	UTIL XFMR		180			180	20 /1	1	A	2	20 /	2000	2000				CUH-2	
	IRRIGATION		180			180	20 /1	3	B	4	/	2000	2000					
	WEST VESTIBULE		720			720	20 /1	5	C	6	/3	2000	2000					
	MOTORIZED DOOR			1500		1500	20 /1	7	A	8	20 /1	200	200				BAS CABINET	
	EAST VESTIBULE		900			900	20 /1	9	B	10	20 /1	200	200				FACP	
	SPARE					0	20 /1	11	C	12	20 /1	300				300	ELEV LOBBY	
	IT ROOM		180			180	20 /1	13	A	14	*20 /1	80	80				E CANOPY HEAT TRACE	
	MAIL ROOM		720			720	20 /1	15	B	16	*20 /1	160	160				W CANOPY HEAT TRACE	
	BATHROOM, COOLER		540			540	20 /1	17	C	18	20 /1	126		126			F/S DAMPERS	
	N DOOR, SHELL		720			720	20 /1	19	A	20	20 /1	1200	1200				VAV CONTROL XFMR	
	N DOOR, SHELL		900			900	20 /1	21	B	22	20 /1	100				100	ELEV LTS	
	S DOOR SHELL		900			900	20 /1	23	C	24	20 /1	500		500			ELEV CAB	
	S DOOR SHELL		720			720	20 /1	25	A	26	20 /1	280				180	ADA - ELEV CAB	
	MOTORIZED DOOR			1500		1500	20 /1	27	B	28	20 /1	280				180	100 ELEV. PIT	
	EF-3			233		233	20 /1	29	C	30	20 /1	180				180	ELEV. PIT	
	UH-1				1650	1650	20 /	31	A	32	20 /1	180				180	MECH ROOM	
	"				1650	1650	/2	33	B	34	20 /1	0						
	CUH-1				4000	4000	40 /	35	C	36	20 /1	0						
	"				4000	4000	/	37	A	38	20 /1	0						
	"				4000	4000	/3	39	B	40	20 /1	0						
						0	20 /1	41	C	42	20 /1	0						

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	100	200	300
RECEPTACLES	2,160	2,880	2,340
MOTORS	1,500	1,500	859
OTHER	9,130	8,010	6,000
TOTAL	12,890	12,590	9,499
PHASE BALANCE	A–B	B–C	C–A
	2%	33%	36%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	0.6 KVA	x 125% =	0.8 KVA	x 95% =	0.6	KW
RECEPTACLES						
FIRST 10 KVA	7.4 KVA	x 100% =	7.4 KVA	x 100% =	7.4	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	1.5 KVA	x 125% =	1.9 KVA	x 90% =	1.4	KW
REMAINDER	2.4 KVA	x 100% =	2.4 KVA	x 90% =	2.1	KW
OTHER	23.1 KVA	x 125% =	28.9 KVA	x 100% =	23.1	KW
TOTAL	35.0 KVA		41.3 KVA		34.6	KW

PANEL CONNECTED PF= 99%
CONNECTED
AMPACITY = 97.1
NEC DEMAND
AMPACITY = 114.8

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = 30mA GFCI
** = SHUNT TRIP

NEW PANEL "H2A"

Panel Notes:

400 A M.L.O.

VOLTAGE 277 / 480 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	XFMR T-L2A	300	1620		0	1920	XFMR /	1	A	2	20 /1	3354				3354	CORR LTS	
	"	0	900	0	1200	2100	/	3	B	4	20 /1	1750				1750	SHELL, BATHROOMS	
	"	0	0	395	0	395	/3	5	C	6	20 /1	0						
	FTU-2-1				6859	6859	40 /1	7	A	8	20 /1	0						
	FTU-2-2				6859	6859	40 /1	9	B	10	20 /1	0						
	FTU-2-3				6859	6859	40 /1	11	C	12	20 /1	0						
	FTU-2-4				6859	6859	40 /1	13	A	14	20 /1	0						
	FTU-2-5				6859	6859	40 /1	15	B	16	20 /1	0						
	FTU-2-6				6859	6859	40 /1	17	C	18	20 /1	0						
	FTU-2-7				6859	6859	40 /1	19	A	20	20 /1	0						
						0	20 /1	21	B	22	20 /1	0						
						0	20 /1	23	C	24	20 /1	0						
						0	20 /1	25	A	26	20 /1	0						
						0	20 /1	27	B	28	20 /1	0						
						0	20 /1	29	C	30	20 /1	0						
						0	20 /1	31	A	32	20 /1	0						
						0	20 /1	33	B	34	20 /1	0						
						0	20 /1	35	C	36	20 /1	0						
						0	20 /1	37	A	38	20 /1	0						
						0	20 /1	39	B	40	20 /1	0						
						0	20 /1	41	C	42	20 /1	0						

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	3,654	1,750	0
RECEPTACLES	1,620	900	0
MOTORS	0	0	395
OTHER	20,576	14,917	13,717
TOTAL	25,850	17,567	14,112
PHASE BALANCE	A–B	B–C	C–A
	47%	24%	83%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	5.4 KVA	x 125% =	6.8 KVA	x 95% =	5.1	KW
RECEPTACLES						
FIRST 10 KVA	2.5 KVA	x 100% =	2.5 KVA	x 100% =	2.5	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	1.2 KVA	x 125% =	1.5 KVA	x 90% =	1.1	KW
REMAINDER	-0.8 KVA	x 100% =	-0.8 KVA	x 90% =	-0.7	KW
OTHER	49.2 KVA	x 125% =	61.5 KVA	x 100% =	49.2	KW
TOTAL	57.5 KVA		71.5 KVA		57.2	KW

CONNECTED
AMPACITY = 69.2
NEC DEMAND
AMPACITY = 86.0

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = GFCI
** = SHUNT TRIP

NEW PANEL "L2A1"

Panel Notes:

400 A MAIN CIRCUIT BREAKER

VOLTAGE 120 / 208 V
PHASE 3 PH
WIRE 4 W

TYPE :
MTG. : SURFACE

65,000 AMPERE SHORT CIRCUIT RATING (FULLY RATED)

NOTE	DESCRIPTION	LTG	RECEPT	MOTORS	OTHER	TOTAL	BREAKER AMP / P	CCT	PH	CCT	BREAKER AMP / P	TOTAL	OTHER	MOTORS	RECEPT	LTG	DESCRIPTION	NOTE
	SPARE				0	225	/	1	A	2	225 /	0					SPARE	
	"				0		/	3	B	4	/	0					"	
	"				0		/3	5	C	6	/3	0					"	
	SPARE				0	225	/	7	A	8	225 /	0					SPARE	
	"				0		/	9	B	10	/	0					"	
	"				0		/3	11	C	12	/3	0					"	
					0	20	/1	13	A	14	225 /	0					SPARE	
					0	20	/1	15	B	16	/	0					"	
					0	20	/1	17	C	18	/3	0					"	
					0	20	/1	19	A	20	20 /1	900			900		N REC	
					0	20	/1	21	B	22	20 /1	180			180		IT ROOM	
					0	20	/1	23	C	24	20 /1	900			900		CENTRAL REC	
					0	20	/1	25	A	26	20 /1	720			720		S REC	
					0	20	/1	27	B	28	20 /1	720			720		S REC	
					0	20	/1	29	C	30	20 /1	333		233			EF-4	
					0	20	/1	31	A	32	20 /1	300				300	ELEV LOBBY	
					0	20	/1	33	B	34	20 /1	1200	1200				VAV CONTROL XFMR	
					0	20	/1	35	C	36	20 /1	162		162			F/S DAMPERS	
					0	20	/1	37	A	38	20 /1	0						
					0	20	/1	39	B	40	20 /1	0						
					0	20	/1	41	C	42	20 /1	0						

PHASE LOADING SUMMARY

LOAD TYPE (VA)	PH A	PH B	PH C
LIGHTING	300	0	0
RECEPTACLES	1,620	900	0
MOTORS	0	0	395
OTHER	0	1,200	0
TOTAL	1,920	2,100	395
PHASE BALANCE	A–B	B–C	C–A
	9%	432%	386%

PANEL LOADING SUMMARY

LOAD TYPE	CONNECTED LOAD KVA	NEC CALCULATED DEMAND LOAD		POWER FACTOR	DEMAND LOAD KW	
LIGHTING	0.3 KVA	x 125% =	0.4 KVA	x 95% =	0.3	KW
RECEPTACLES						
FIRST 10 KVA	2.5 KVA	x 100% =	2.5 KVA	x 100% =	2.5	KW
REMAINDER	0.0 KVA	x 50% =	0.0 KVA	x 100% =	0.0	KW
MOTORS						
LARGEST	0.2 KVA	x 125% =	0.3 KVA	x 90% =	0.2	KW
REMAINDER	0.2 KVA	x 100% =	0.2 KVA	x 90% =	0.1	KW
OTHER	1.2 KVA	x 125% =	1.5 KVA	x 100% =	1.2	KW
TOTAL	4.4 KVA		4.8 KVA		4.4	KW

PANEL CONNECTED PF= 99%
CONNECTED
AMPACITY = 12.3
NEC DEMAND
AMPACITY = 13.5

GENERAL NOTES:
PROVIDE NEW UPDATED PANEL DIRECTORIES FOR PANELS THAT ARE INCLUDED IN THIS PROJECT. PROVIDE TYPED DESCRIPTIONS OF NEW CIRCUITS BEING INSTALLED. INDICATE NEW SPARES IN PENCIL.

BREAKER ACCESSORIES
* = GFCI
** = SHUNT TRIP

NOTE: Comply with 2003 NEC Article Health One 4.7

NOTE: Comply with 2003 NEC. Article 110-14, 22, and 26

NOTE: Comply with 2003 NEC Article 408.4

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED
AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted
Date DEC 18 2004

Davis Partnership Architects
2301 BLAKE ST., STE. #100
DENVER, COLORADO 80205
303.861.8565 F.303.861.3027

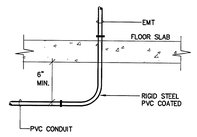
0137 MAIN STREET , UNIT C106
POST OFFICE BOX 2711
EDWARDS, COLORADO 81632
970.926.8960 F.970.926.8961

weyland enterprises, inc.

MedCap PROPERTIES

CATOR RUMA & ASSOCIATES, CO
CONSULTING MECHANICAL/ELECTRICAL ENGINEERS
1560 DOVER STREET, SUITE 2
LAKEWOOD, COLORADO 80215
303.232.6200 F.303.233.3701

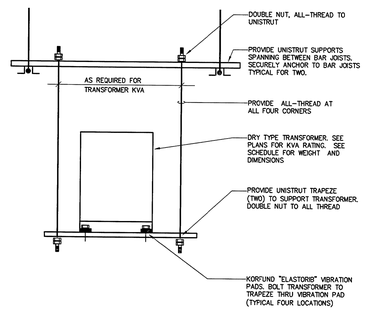
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DESIGN DEVELOPMENT	17NOV03	
50% CONST. DOCUMENTS	21SEPT04	
95% CONST. DOCUMENTS	08OCT04	
CONSTRUCTION DOCU



NOTE: PROVIDE LONG SWEEP ELBOWS FOR DATA AND COMMUNICATION CONDUIT INSTALLATION.

CONDUIT RISER DETAIL
NO SCALE

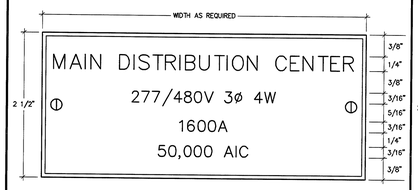
5-23-02 16110.5



TRANSFORMER MOUNTING DETAIL
NO SCALE

NOTE: SEE SPECIFICATIONS FOR ADDITIONAL SUPPORT, SEISMIC AND OTHER REQUIREMENTS.

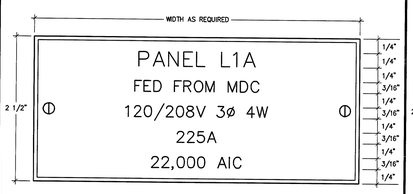
7-24-03 16190.1A



MAIN DISTRIBUTION CENTER NAMEPLATE DETAIL
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.

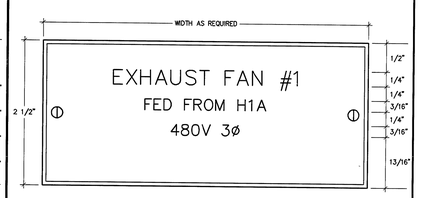
9-8-98 16195.1



SUB-DISTRIBUTION CENTER AND BRANCH PANELBOARD NAMEPLATE DETAIL
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.

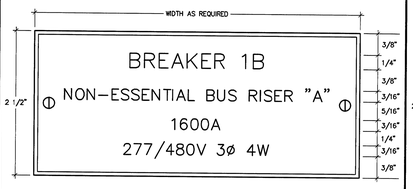
9-8-98 16195.2



UTILIZATION EQUIPMENT NAMEPLATE DETAIL
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.

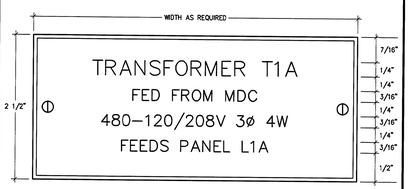
9-8-98 16195.3



MAIN DISTRIBUTION CENTER COMPARTMENT NAMEPLATE DETAIL
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.

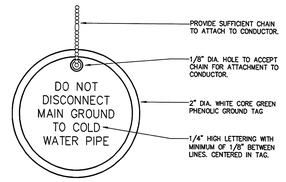
9-8-98 16195.4



TRANSFORMER NAMEPLATE DETAIL
SCALE: FULL

NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL NAMEPLATE INFORMATION.
2. REWORD NAMEPLATE FOR FIELD CONDITIONS.

9-8-98 16195.5



GROUND CONDUCTOR TAG DETAIL
NO SCALE

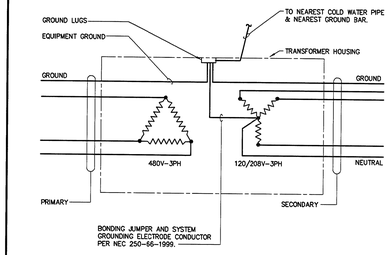
ALL GROUNDING WORK DONE UNDER THIS CONTRACT SHALL INCLUDE THE FOLLOWING UNLESS SPECIFICALLY EXCLUDED:

A. TAG ALL GROUNDING ELECTRODE CONDUCTORS AND ASSOCIATED BONDING CONDUCTORS AT THEIR POINT OF ATTACHMENT TO GROUND BUS AND GROUNDING ELECTRODE (WHERE POSSIBLE) WITH A ROUND WHITE CORE, GREEN PHENOLIC NAMEPLATE AS SHOWN IN DETAIL 'A'.

B. IDENTIFY ABOVE REFERENCED CONDUCTORS WITH 6" BAND OF GREEN TAPE AT EACH END AND AT 10' INTERVALS WHERE RUN EXPOSED. STENCIL CONDUITS CONTAINING THESE CONDUCTORS "MAIN GROUND" IN GREEN KROY LETTERS, 1/2" DIAMETER OF CONDUIT IN HEIGHT.

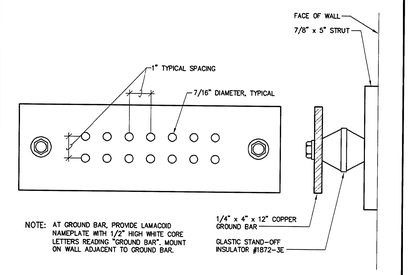
C. SHOW GROUNDING ELECTRODE SYSTEM CONNECTIONS BY IDENTIFYING (ON THE RECORD DRAWING MARK-UPS) WHERE (ROOM NO. AND/OR NAME) AND TO WHAT (ROD, WATER PIPE, GROUND BUS, ETC.) THEY TERMINATE.

12-01-00 16195.8



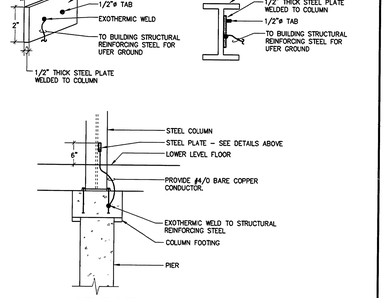
TRANSFORMER GROUNDING DETAIL
NO SCALE

3-28-00 16452.1



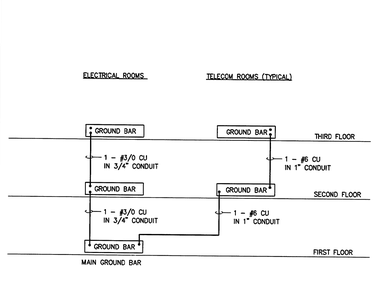
GROUND BAR DETAIL
NO SCALE

9-8-98 16452.2

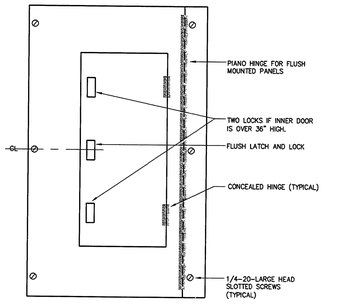


RE-BAR UFER GROUND AT FOOTING WITH PIER
NO SCALE

10-14-98 16452.4



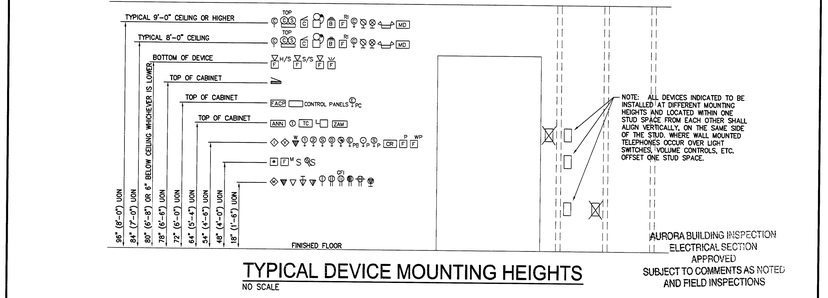
GROUND BAR RISER
NO SCALE



HINGED TRIM TO BOX PANEL FRONT
NO SCALE

NOTES:
1. ALL BOLTS SHALL HAVE LARGE (3/8") ROUND HEAD. NO WASHERS ALLOWED
2. TYPICAL FOR ALL 120/208V BRANCH PANELBOARDS.

9-8-98 16470.1A



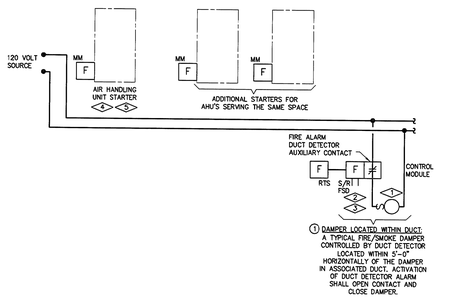
TYPICAL DEVICE MOUNTING HEIGHTS
NO SCALE

NOTES:
1. HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
2. WHERE EVER DEVICES ARE INDICATED TO BE ABOVE DOORS, DEVICE SHALL BE CENTERED BETWEEN TOP OF DOOR TRIM AND CEILING LINE.
3. MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER THOSE SHOWN ABOVE.

6-4-02 16143.1

AURORA BUILDING INSPECTION
ELECTRICAL SECTION
APPROVED
SUBJECT TO COMMENTS AS NOTED AND FIELD INSPECTIONS

CITY OF AURORA
ELEC. SECTION
Approved as Noted
DEC 16 2004
Date

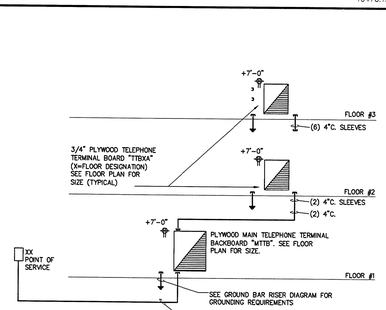


TYPICAL FIRE/SMOKE DAMPER CONTROL WIRING DIAGRAM
NO SCALE

11-17-03 2003-264

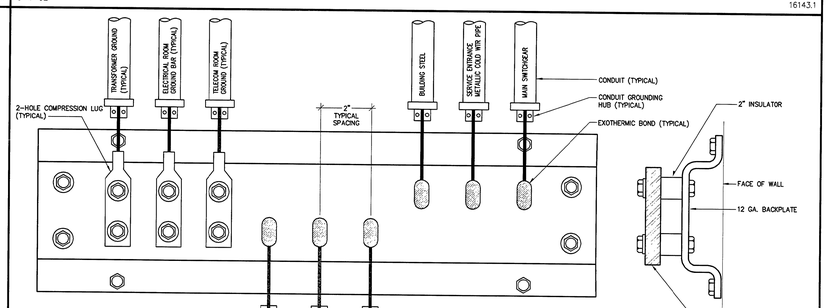
TYPICAL FIRE/SMOKE DAMPER GENERAL NOTES:
1. REFER TO FIRE/SMOKE AND SMOKE DAMPER SCHEDULE ON MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION. SEE MECHANICAL PLAN DRAWING FOR ACTUAL LOCATION AND QUANTITIES OF DAMPERS.
2. PROVIDE CONTROL MODULE AT EACH FSD DETECTOR DEVICE AS REQUIRED.

TYPICAL FIRE/SMOKE DAMPER DETAIL NOTES:
1. ELECTRIC/PNEUMATIC SWITCH OR ELECTRIC DAMPER OPERATOR(TYPICAL). EP SWITCH PROVIDED WITH DAMPER OPERATOR. PROVIDE LOCAL DISCONNECT.
2. CONNECT CONTROL MODULES AND DETECTORS TO FACP FOR ALARM AND ANNUNCIATION SEPARATE FROM DAMPER CONTROL WIRING.
3. COORDINATE AND PROVIDE CEILING/WALL ACCESS DOORS TO DUCT DETECTORS WHERE REQUIRED.
4. PROVIDE CLOSURE OF ALL ASSOCIATED FIRE/SMOKE DAMPERS ON AIR HANDLING UNIT SHUTDOWN. PROVIDE MONITOR MODULE AT EACH UNIT RELATED TO THE DAMPERS TO MONITOR RUN STATUS OF UNIT. PROVIDE CONDUIT, WIRING AND CONNECTIONS.
5. COORDINATE AND PROGRAM AIR HANDLING UNIT SHUTDOWN TO AHU'S UPON CLOSURE OF AN ASSOCIATED FIRE/SMOKE DAMPER WHERE NOTED ON FIRE/SMOKE AND SMOKE DAMPER SCHEDULE.



TELEPHONE ONE-LINE DIAGRAM
NO SCALE

9-8-98 16740.1



MAIN GROUND BAR DETAIL
NO SCALE

7-30-01 16452.3

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ISSUE/REVISION	DATE	NO.
DESIGN DEVELOPMENT	17NOV03	
50% CONST. DOCUMENTS	21SEPT04	
95% CONST. DOCUMENTS	08OCT04	
CONSTRUCTION DOCUMENTS	26OCT04	

COLORADO REGISTERED PROFESSIONAL ENGINEER
THOMAS P. HUGHES
19781
OCT 26 2004

MEDICAL CENTER OF AURORA SOUTH
AURORA, COLORADO

Health ONE

MEDICAL OFFICE BUILDING

CONSTRUCTION DOCUMENTS

ELECTRICAL DETAILS

DATE	26 OCT 04
DRAWN BY	IPD
CHK'D BY	CAB
X-REF FILE	P-DET1

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SHEET NUMBER:

E5.1

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