FEEDER SCHEDULE ALUMINUM	
4000/W	11[W-700kcmil, 750kcmil]G, 4"C]
3000/W	8[W-700kcmil, 600kcmil]G, 4"C]
2500/W	7[W-700kcmil, 600kcmil]G, 4"C]
2000/W	6[W-600kcmil, 400kcmil]G, 4"C]
1600/W	5[W-600kcmil, 350kcmil]G, 4"C]
1200/W	4[W-500kcmil, 250kcmil]G, 3-1/2"C]
1000/W	4[W-350kcmil, 4/0]G, 3"C]
800/W	3[W-400kcmil, 3/0]G, 3"C]
750/W	3[W-350kcmil, 3/0]G, 3"C]
600/W	2[W-500kcmil, 2/0]G, 3-1/2"C]
500/W	2[W-350kcmil, 1/0]G, 3"C]
400/W	2[W-250kcmil, #1]G, 3"C]
350/W	2[W-4/0, #1]G, 2-1/2"C]
300/W	W-500kcmil, #2G, 3-1/2"C
250/W	W-350kcmil, #2G, 3"C
225/W	W-300kcmil, #2G, 3"C
200/W	W-250kcmil, #4G, 3"C
175/W	W- 4/0, #4G, 2-1/2"C
150/W	W- 3/0, #4G, 2"C
125/W	W- 2/0, #4G, 2"C
100/W	W-1/0, #6G, 2"C
90/W	W-1/0, #6G, 2"C
80/W	W#1, #6G, 1-1/2"C
70/W	W#2, #6G, 1-1/4"C
60/W	W#2, #8G, 1-1/4"C
50/W	W#4, #8G, 1-1/4"C
40/W	W#6, #8G, 1"C

THIS TABLE INDICATES MINIMUM CONDUCTOR SIZE FOR FEEDERS OF THE AMPACITY INDICATED WHERE #/W INDICATES THE #-AMPACITY AND W-NUMBERS OF WIRE. #S/W INDICATES NO GROUND. ALL CONDUCTORS SHALL BE ALUMINUM UNLESS NOTED OTHERWISE.

*CONDUCTOR AMPACITIES SHALL BE BASED ON TABLE 310.15(B)(16) 60 DEGREE COLUMN UP TO 100 AMPS AND 75 DEGREE COLUMN ABOVE 100 AMPS UNLESS OTHERWISE PERMITTED BY NEC. AMPACITY RATING SHALL BE SELECTED IN ACCORDANCE WITH NEC 110.14 (C).

THE MASTER ELECTRICIAN SHALL BE RESPONSIBLE FOR ENSURING THAT NO FEEDERS OR BRANCH CIRCUITS ARE INSTALLED IN A MANNER OR SIZED IN SUCH A WAY AS TO VIOLATE NEC

SERVICE	EQUIPMENT
GROUND	GROUND
TABLE	TABLE
150G/CU #6	20EG #10
200G/CU #4	60EG #8
300G/CU 2	100EG #6
500G/CU 1/0	200-1200A PER ABOVE
1000G/CU 2/0	1600EG 350KCMIL
>1000G/CU 3/0	2000EG 400KCMIL

SERVICE GROUND CONDUCTORS SIZED PER NEC TABLE 250.66 EQUIPMENT GROUND CONDUCTORS SIZED PER NEC TABLE 250.122 ALL CONDUCTORS SHALL BE ALUMINUM UNLESS NOTED OTHERWISE

THE SERVICE GROUND CHART INDICATES THE MINIMUM SERVICE GROUND CONDUCTORS BASED ON #G WHERE # IS THE AMPACITY FROM THE CHART ABOVE, AND THE EQUIPMENT GROUND CHART INDICATES THE MINIMUM EQUIPMENT GROUNDING CONDUCTOR SIZE #EG WHERE # IS THE RATING/SETTING OF THE OVERCURRENT DEVICE PROTECTING THE CONDUCTORS AND EQUIPMENT

WHERE DISCREPANCIES OCCUR BETWEEN THE FEEDER SCHEDULE SCHEDULE AND THE GROUNDING TABLES, THE LARGER CONDUCTOR SHALL BE USED UNLESS OTHERWISE PERMITTED BY THE NEC.

THE INSTALLATION SHALL MEET ALL NEC 250 GROUNDING AND BONDING REQUIREMENTS INCLUDING 250.4 PATH FOR FAULT CURRENT. PROVIDE COMPLETE RACEWAY SYSTEMS METALLICALLY JOINED, CONNECTED, AND FITTINGS AS REQUIRED FOR ELECTRICAL CONTINUITY PER NEC 300.10

City of Aurora Building Division
Project: *Plan Revisions to RSN 1652119*
Address: *1400 South Potomac Street Unit 250*
Occupancy Group: *IBC B*
Construction Type: *UBC II-N-SPK*
RSN: *1672715*
Permit: *22-2243719-LT*

City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Bobby McKinzie*
Date: *Nov 13, 2022*
2015 INTERNATIONAL CODES & 2020 NEC

SHORT CIRCUIT CALCULATIONS BASED ON BUSSMAN POINT TO POINT METHOD.

SHORT CIRCUIT SCHEDULE

POINT	DESCRIPTION	Short Circuit ISC SYM RMS	Multiplier M	F factor F	Constant C	Line-Line Voltage V	Length of run L	I available I	Xfmer Rated kVA	Xfmer Imped %Z
X1	PAD MOUNTED TRANSFORMER	16,900								
X2	MAIN SWITCHBOARD	16,472	0.975	0.026	117,255	480	50	16,900	-----	-----
X3	PANEL "H200"	8,119	0.493	1.029	5,777	480	100	16,472	-----	-----
X4	TRANSFORMER PRIMARY	7,811	0.962	0.039	3,713	480	5	8,119	-----	-----
X5	TRANSFORMER SECONDARY	3,209	0.411	4.618	-----	-----	-----	7,811	45	3.2
X6	PANEL "L200"	3,136	0.977	0.023	5,777	208	5	3,209	-----	-----
X7	PANEL "L250"	3,094	0.964	0.037	5,777	208	8	3,209	-----	-----

Three (3) phase Line to Line Short Circuit Calculations:

Is.c = (lavailable)*M

M = 1/(1+F)

F = (1.732 x L x lavailable3Ø)/(C x V)

C = values found in BUSSMANN SPD Handbook for conductors and busway

V = the line to line voltage

L = length of run in feet

The same calculations for single (1) phase Line to Line, F value changes:

F = (2 x L x lavailable1Ø)/(C x V)

The same calculations for the fault current at the secondary side of a transformer, F value changes:

F = (IscPrimary x Vprimary x 1.732 x %Z)/(100,000 x kVAtrans)

For multiple conductors per phase, the single conductor C value from the table is multiplied by the number of conductors per phase.

NOTES:

1. "Length of Run" is shown for calculations only, and should not be used for bidding purposes.

Install electrical connections per 2020 NEC 110.14, Identify disconnects per 2020 NEC 110.22 and provide working space around Electrical equipment per 2020 NEC 110.26

Provide a Grounding Electrode System bonded To the service equipment enclosure, grounded Conductors, and grounded electrode conductors Per 2020 NEC 250.50 and 250.104

Every circuit and circuit modification shall be legibly Identified as to it's clear, evident and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others. 2020 NEC 408.4

NEW PANEL "H200"

11/2/2022 277 / 480 VOLT 3 PHASE 4 WIRE SERVICE 14,000
BUS RATING: 100A MAIN: MLO MOUNTING: SURFACE
LOCATION: SUITE 200 ELEC ROOM PROJECT: SUITE 200
COMMENTS: JOB NO.: 2022-055-00

TYPE	NOTE	DESCRIPTION	BRKR	CCT	LOAD	Ø	LOAD	CCT	BRKR	DESCRIPTION	NOTE	TYPE
RME		45KVA TRANSFORMER	70/3	1	13076	A	0	2	---	BUSSED SPACE		
RME		---	---	3	9554	B	0	4	---	BUSSED SPACE		
RKE		---	---	5	10230	C	0	6	---	BUSSED SPACE		
		BUSSED SPACE	---	7	0	A	0	8	---	BUSSED SPACE		
		BUSSED SPACE	---	9	0	B	0	10	---	BUSSED SPACE		
		BUSSED SPACE	---	11	0	C	0	12	---	BUSSED SPACE		
		BUSSED SPACE	---	13	0	A	0	14	---	BUSSED SPACE		
		BUSSED SPACE	---	15	0	B	0	16	---	BUSSED SPACE		
		BUSSED SPACE	---	17	0	C	0	18	---	BUSSED SPACE		
		BUSSED SPACE	---	19	0	A	0	20	---	BUSSED SPACE		
		BUSSED SPACE	---	21	0	B	0	22	---	BUSSED SPACE		
		BUSSED SPACE	---	23	0	C	0	24	---	BUSSED SPACE		
		BUSSED SPACE	---	25	0	A	0	26	---	BUSSED SPACE		
		BUSSED SPACE	---	27	0	B	0	28	---	BUSSED SPACE		
		BUSSED SPACE	---	29	0	C	0	30	---	BUSSED SPACE		

	CONNECTED VA A	B	C	D.F.	DEMAND VA A	B	C
CONTINUOUS / LIGHTING	0	0	0	1.25	0	0	0
RECEPT. (FIRST 10 KW)	8,100	1,900	0	1.00	8,100	1,900	0
RECEPT. (REMAINDER)	0	5,300	5,580	0.50	0	2,650	2,790
MOTORS	1,176	354	0	1.00	1,176	354	0
LARGEST MOTOR				1.25	0	0	0
KITCHEN	0	0	850	1.00	0	0	850
MISCELLANEOUS	3,800	2,000	3,800	1.00	3,800	2,000	3,800
TOTAL	13,076	9,554	10,230		13,076	6,904	7,440

THIS PANELS TOTAL LOAD INCLUDES THE FOLLOWING LOADS:
SUBFEED BRKR 1: 0 VA, 0.0 AMPS
SUBFEED BRKR 2: 0 VA, 0.0 AMPS
FEED THRU PANEL DESIGNATION: 0 VA, 0.0 AMPS

TOTAL DEMAND VA 27,420 VA
TOTAL DEMAND AMPS 33.0 AMPS

C = CONTINUOUS/LIGHTING R = RECEPTACLE M = MOTOR K = KITCHEN E = MISCELLANEOUS

NOTES:

NEW PANEL "L250" (SEE NOTE 1)

11/2/2022 120 / 208 VOLT 3 PHASE 4 WIRE SERVICE 10,000
BUS RATING: 100A MAIN: 100A MCB MOUNTING: SURFACE
LOCATION: SUITE 250 HALLWAY PROJECT: SUITE 200 / 250
COMMENTS: JOB NO.: 2022-056-00

TYPE	NOTE	DESCRIPTION	BRKR	CCT	LOAD	Ø	LOAD	CCT	BRKR	DESCRIPTION	NOTE	TYPE
R		OMM REC	20/1	1	1080	A	900	2	20/1	EXAM/HALL REC		R
R		SHARED OFFICE	20/1	3	360	B	720	4	20/1	EXAM REC		R
R		SHARED OFFICE	20/1	5	360	C	540	6	20/1	NURSE STATION REC		R
R		EXAM REC	20/1	7	1080	A	360	8	20/1	NURSE STATION REC		R
R		EXAM/OFFICE REC	20/1	9	720	B	900	10	20/1	EXAM/HALL REC		R
R		PROCEDURE/STORRAGE REC	20/1	11	900	C	1080	12	20/1	EXAM REC		R
R		LAB 110 COUNTER REC	20/1	13	360	A	720	14	20/1	ULTRASOUND REC		R
R		LAB 110 COUNTER REC	20/1	15	360	B	1200	16	20/1	COPIER		E
E		LAB 110 UC REF	20/1	17	600	C	1340	18	20/1	CHECK IN REC		RE
E		VACCINE REF	20/1	19	800	A	360	20	20/1	CHECK IN REC		R
E		VACCINE REF	20/1	21	800	B	540	22	20/1	WAITING/HALL REC		R
E		VACCINE REF	20/1	23	800	C	800	24	20/1	IT REC		E
R		VACCINE AGNS/TOILET REC	20/1	25	540	A	800	26	20/1	IT REC		E
		SPARE	20/1	27	0	B	212	28	20/1	EF-1/TF-1		M
		SPARE	20/1	29	0	C	0	30	20/1	SPARE		
		BUSSED SPACE	---	31	0	A	0	32	---	BUSSED SPACE		
		BUSSED SPACE	---	33	0	B	0	34	---	BUSSED SPACE		
		BUSSED SPACE	---	35	0	C	0	36	---	BUSSED SPACE		
		BUSSED SPACE	---	37	0	A	0	38	---	BUSSED SPACE		
		BUSSED SPACE	---	39	0	B	0	40	---	BUSSED SPACE		
		BUSSED SPACE	---	41	0	C	0	42	---	BUSSED SPACE		

	CONNECTED VA A	B	C	D.F.	DEMAND VA A	B	C
CONTINUOUS / LIGHTING	0	0	0	1.25	0	0	0
RECEPT. (FIRST 10 KW)	4,420	2,700	2,880	1.00	4,420	2,700	2,880
RECEPT. (REMAINDER)	980	900	540	0.50	490	450	270
MOTORS	0	212	0	1.00	0	212	0
LARGEST MOTOR				1.25	0	0	0
KITCHEN	0	0	0	1.00	0	0	0
MISCELLANEOUS	1,600	2,000	3,000	1.00	1,600	2,000	3,000
TOTAL	7,000	5,812	6,420		6,510	5,362	6,150

THIS PANELS TOTAL LOAD INCLUDES THE FOLLOWING LOADS:
SUBFEED BRKR 1: 0 VA, 0.0 AMPS
SUBFEED BRKR 2: 0 VA, 0.0 AMPS
FEED THRU PANEL DESIGNATION: 0 VA, 0.0 AMPS

TOTAL DEMAND VA 18,022 VA
TOTAL DEMAND AMPS 50.0 AMPS

C = CONTINUOUS/LIGHTING R = RECEPTACLE M = MOTOR K = KITCHEN E = MISCELLANEOUS

NOTES:
1. PANEL SHALL HAVE PERMANENTLY FIXED LABEL STATING "PANEL SHARES 45KVA TRANSFORMER WITH SUITE 200 PANEL "L200".

NEW PANEL "L200" (SEE NOTE 1)

11/2/2022 120 / 208 VOLT 3 PHASE 4 WIRE SERVICE 10,000
BUS RATING: 100A MAIN: 100A MCB MOUNTING: SURFACE
LOCATION: SUITE 200 ELEC ROOM PROJECT: SUITE 200
COMMENTS: JOB NO.: 2022-055-00

TYPE	NOTE	DESCRIPTION	BRKR	CCT	LOAD	Ø	LOAD	CCT	BRKR	DESCRIPTION	NOTE	TYPE
R		RESIDENT OFFICE REC	20/1	1	720	A	920	2	20/1	OFFICE REC/CLASSROOM TV		RE
R		RESIDENT OFFICE REC	20/1	3	720	B	720	4	20/1	OFFICE /CORRIDOR REC		R
R		RESIDENT OFFICE REC								CORRIDOR/OFFICE REC		R
E		RESIDENT OFFICE PRN								PRECEPTER/TOILET REC		R
R		OFFICE REC								PRECEPTER/ELEC REC		R
R		OFFICE REC								IT		E
R		CLASSROOM/TOILET RE								IT		E
R		CLASSROOM REC								EF-1,TF-1		M
K		REF	20/1	17	850	C	0	18	20/1	SPARE		
M		DISPOSAL	20/1	19	1176	A	0	20	20/1	SPARE		
R		BREAK REC	20/1	21	180	B	0	22	20/1	SPARE		
R		BREAK REC	20/1	23	180	C	0	24	20/1	SPARE		
		BUSSED SPACE	---	25	0	A	0	26	---	BUSSED SPACE		
		BUSSED SPACE	---	27	0	B	0	28	---	BUSSED SPACE		
		BUSSED SPACE	---	29	0	C	0	30	---	BUSSED SPACE		
		BUSSED SPACE	---	31	0	A	0	32	---	BUSSED SPACE		
		BUSSED SPACE	---	33	0	B	0	34	---	BUSSED SPACE		
		BUSSED SPACE	---	35	0	C	0	36	---	BUSSED SPACE		
		BUSSED SPACE	---	37	0	A	0	38	---	BUSSED SPACE		
		BUSSED SPACE	---	39	0	B	0	40	---	BUSSED SPACE		
		BUSSED SPACE	---	41	0	C	0	42	---	BUSSED SPACE		

Not reviewed under this permit

	CONNECTED VA A	B	C	D.F.	DEMAND VA A	B	C
CONTINUOUS / LIGHTING	0	0	0	1.25	0	0	0
RECEPT. (FIRST 10 KW)	2,700	3,600	2,160	1.00	2,700	3,600	2,160
RECEPT. (REMAINDER)	0	0	0	0.50	0	0	0
MOTORS	1,176	142	0	1.00	1,176	142	0
LARGEST MOTOR				1.25	0	0	0
KITCHEN	0	0	850	1.00	0	0	850
MISCELLANEOUS	2,200	0	800	1.00	2,200	0	800
TOTAL	6,076	3,742	3,810		6,076	3,742	3,810

THIS PANELS TOTAL LOAD INCLUDES THE FOLLOWING LOADS:
SUBFEED BRKR 1: 0 VA, 0.0 AMPS
SUBFEED BRKR 2: 0 VA, 0.0 AMPS
FEED THRU PANEL DESIGNATION: 0 VA, 0.0 AMPS

TOTAL DEMAND VA 13,628 VA
TOTAL DEMAND AMPS 37.8 AMPS

C = CONTINUOUS/LIGHTING R = RECEPTACLE M = MOTOR K = KITCHEN E = MISCELLANEOUS

NOTES:
1. PANEL SHALL HAVE PERMANENTLY FIXED LABEL STATING "PANEL SHARES 45KVA TRANSFORMER WITH SUITE 250 PANEL "L250".

FIRE ALARM SYSTEM NOTES (CONTRACTOR DESIGN)

THE FIRE ALARM SYSTEM SHALL BE DESIGN/BUILD BY THE CONTRACTOR. DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO OBTAIN APPROVAL OF MODIFICATIONS AND ADDITIONS TO THE EXISTING BUILDING FIRE ALARM SYSTEM. ALL FIRE ALARM SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR THE CORRESPONDING STATE HAVING JURISDICTION. ALL DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM AND SHALL BE SO CERTIFIED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT MEET THE REQUIREMENTS OF LOCAL JURISDICTION.

1. THE FIRE ALARM SYSTEM IS EXISTING TO BE FIELD VERIFIED. ALL DEVICES ADDED TO THE SYSTEM SHALL BE FULLY COMPATIBLE AND VERIFIED THAT EXISTING SYSTEM WILL BE ABLE TO ACCOMODATE ALL NEW DEVICES. PROVIDE ALL NECESSARY CONNECTION TO THE BASE BUILDING FIRE ALARM SYSTEM.
2. THE FIRE ALARM SYSTEM SHALL MEET ALL CODE, LOCAL JURISDICTIONAL REQUIREMENTS AND COMPLY WITH THE LATEST APPLICABLE PROVISIONS OF NFPA 70, NFPA 72, ADA 1990, ANSI 117.1, IBC, AND IFC, EXCEPT AS MODIFIED BY THE LOCAL JURISDICTION
3. THE FIRE ALARM SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: ADDRESSABLE DETECTION (HEAT SMOKE) DEVICES, NOTIFICATION DEVICES, MANUAL PULL-STATIONS, MAGNETIC DOOR HOLDER DEVICES, SMOKE DAMPER CONTROL (PER IBC), ETC.
4. DETECTORS SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH NFPA 72 AND LOCAL JURISDICTIONAL REQUIREMENTS DETECTORS INSTALLED IN ANY CONCEALED LOCATIONS SHALL HAVE A REMOTE VISIBLE LED INDICATOR.
5. NOTIFICATION DEVICES SHALL BE LOCATED AS REQUIRED BY LOCAL CODE AT LEAST 80 INCHES FROM FINISHED FLOOR.
6. ALL RATED PENETRATIONS SHALL BE FIRE SEALED.
7. DETECTORS SPACING ON NON-CONTINUOUS PLANE CEILINGS SHALL BE ADJUSTED ACCORDING TO CODE AND LOCAL JURISDICTION.
8. LOCATE CORRIDOR DETECTORS TO LINE UP WITH LIGHT FIXTURES. KEEP DETECTORS 3' AWAY FROM AIR DIFFUSERS.
9. ALL FIRE ALARM WIRING MUST BE RUN IN APPROVED RACEWAY. EXPOSED PLENUM RATED WIRING WILL BE ALLOWED IN CEILING PLENUM WITH PRIOR APPROVAL OF BUILDING OWNER AND AUTHORITY HAVING JURISDICTION. EXPOSED WIRING WILL NOT BE ALLOWED DOWN WALL SURFACES.
10. STROBES SHALL BE SYNCHRONIZED.

LOAD SUMMARY - MAIN SWITCHBOARD

1600A, 277/480V, 3Ø, 4W

LOAD IDENTIFICATION	CONNECTED LOAD (VA)	CONNECTED LOAD (A)
*EXISTING LOAD ON MSB	602.901	725.2
LOAD REMOVED VIA REVISION TO LED LTG	-4,722	-5.7
LOAD REMOVED VIA DEMOED POWER	-7,840	-9.4
**LOAD ADDED VIA PANEL L200	13,628	16.4
LOAD ADDED VIA PANEL L250	18,022	21.7
TOTAL LOAD ON 1600A SERVICE	621,989	748

NOTES:

* EXISTING LOAD FROM PREVIOUS ENGINEERED DRAWINGS.
** PANEL SERVES ADJACENT SUITE DESIGNED AT THE SAME TIME AS THIS SUITE.

ELECTRICAL LEGEND

NOTE: NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT.

- GROUNDED DUPLEX RECEPTACLE
- COMBO GROUNDED DUPLEX RECEPTACLE AND USB CHARGING PORT
- GROUNDED SWITCHED DUPLEX/QUAD RECEPTACLE
- GROUNDED SPLIT-WIRED RECEPTACLE
- GROUNDED SINGLE RECEPTACLE
- FOUR PLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE SUBSCRIPT = AMPACITY
- FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
- CLOCK RECEPTACLE
- FLOOR MOUNTED RECEPTACLE
- FLOOR MOUNTED FOUR PLEX RECEPTACLE
- POWER ONLY POKE-THRU
- POWER/DATA POKE-THRU
- MOTOR
- PLUG MOLD
- POWER/TELEPHONE POLE
- WIRELESS ACCESS POINT
- TELEPHONE OUTLET
- FLOOR MOUNTED TELEPHONE OUTLET
- FLOOR MOUNTED TELEPHONE/DATA OUTLET
- TELEPHONE/DATA OUTLET
- DATA OUTLET
- FLOOR MOUNTED DATA OUTLET
- SWITCH & RECEPTACLE COMBINATION
- 1, 2, OR 3 BUTTON STATION
- TELEVISION OUTLET
- FLOOR MOUNTED TELEVISION OUTLET
- JUNCTION BOX
- FLOOR MOUNTED JUNCTION BOX
- WALL MOUNTED J-BOX
- BUZZER
- CHIME
- COMBINATION STARTER/DISCONNECT SWITCH
- EQUIPMENT NON-FUSED DISCONNECT SWITCH
- EQUIPMENT FUSED DISCONNECT SWITCH
- MAGNETIC CONTROLLER (STARTER)
- ELECTRICAL PANELBOARD SURFACE MOUNTING
- ELECTRICAL PANELBOARD RECESSED MOUNTING
- TELEPHONE TERMINAL BOARD
- RESIDENTIAL COMMUNICATION CENTER
- MAIN DISTRIBUTION PANEL
- PULL BOX
- MOTOR CONTROL CENTER
- METER
- TRANSFORMER
- RELAY
- CONTACTOR
- SOLENOID VALVE
- CARD READER
- SPEAKER - PAGING AND OR SOUND SYSTEM
- THERMOSTAT
- BATTERY
- PHOTOCELL
- CIRCUIT BREAKER
- BREAKER WITH DRAWOUT FEATURE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- FUSED SWITCH
- POWER TRANSFORMER
- CURRENT TRANSFORMER
- GROUND
- CONDUIT UP
- CONDUIT DOWN
- CONDUIT CAP
- CONDUIT CONTINUATION
- HOMERUN ARROWS
- MECHANICAL EQUIPMENT DESIGNATION
- DETAIL NOTE DESIGNATION
- KITCHEN EQUIPMENT DESIGNATION
- ELECTRICAL WIRE SIZE

- DELTA REVISION NOTE
- TWO WAY COMMUNICATION
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM PANEL
- FIRE ALARM ANNUNCIATOR CONTROL PANEL
- MANUAL PULL STATION
- FIRE STROBE
- FIRE HORN OR SPEAKER WITH STROBE
- FIRE ALARM HORN & LIGHT
- FIRE ALARM HORN
- MAGNETIC DOOR HOLDER
- FIRE ALARM FLOW SWITCH
- TAMPER SWITCH
- FIRE THERMAL DETECTOR
- SMOKE DETECTOR I = IONIZATION, P = PHOTOELECTRIC
- COMBINATION CO/SMOKE DETECTOR
- DUCT FIRE DETECTOR (RETURN)
- DUCT FIRE DETECTOR (SUPPLY)
- REMOTE INDICATING LIGHT
- FIRE / SMOKE DAMPER
- 120V. MOTORIZED SMOKE DAMPER
- VOLUME CONTROL
- MICROPHONE RECEPTACLE
- WALL MOUNTED FIXTURE
- RECESSED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- STRIP LIGHT FIXTURE
- CEILING FIXTURE
- PORCELAIN LAMP HOLDER
- WALL WASHER
- TRACK HEAD FIXTURE
- TRACK WITH TRACK HEAD FIXTURE
- EMERGENCY FIXTURE - SHADED
- WALL PACK FIXTURE
- SURFACE CEILING FIXTURE
- POLE MOUNTED FIXTURE
- BATTERY PACK EMERGENCY LIGHT
- EXIT LIGHT - SHADED INDICATES FACE
- WALL MOUNTED OCCUPANCY SENSOR
- CEILING MOUNTED OCCUPANCY SENSOR
- CEILING MOUNTED VACANCY SENSOR
- SINGLE POLE SWITCH
- DOUBLE POLE SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- SWITCH WITH INTEGRATED OCCUPANCY SENSOR
- WALL MOUNTED VACANCY SENSOR SWITCH
- SWITCH & PILOT LAMP
- KEY OPERATED SWITCH
- DIMMER SWITCH
- THERMAL OVERLOAD SWITCH
- AFF ABOVE FINISH FLOOR
- AC ABOVE COUNTER - VERIFY HEIGHT
- AFCI ARC-FAULT CIRCUIT INTERRUPTER
- AG ABOVE COUNTER/GROUND FAULT INTERRUPTING
- CCT CIRCUIT
- E EXISTING TO REMAIN
- EC ELECTRICAL CONTRACTOR
- EF EXHAUST FAN
- ER EXISTING TO BE RELOCATED
- EX EXISTING TO BE REMOVED
- EWC ELECTRICAL WATER COOLER
- GFCI GROUND FAULT INTERRUPTING
- HP HOUSE PHONE
- IH INSTA HOT
- (P) PARTIAL CIRCUIT USED IN MULTIPLE LOCATIONS
- (PART) SAME AS (P)
- (S) SURFACE MOUNTED DEVICE
- TTB TELEPHONE TERMINAL BOARD
- UON UNLESS OTHERWISE NOTED
- WG WEATHER PROOF/GROUND FAULT INTERRUPTING
- WP WEATHER PROOF

CODES:

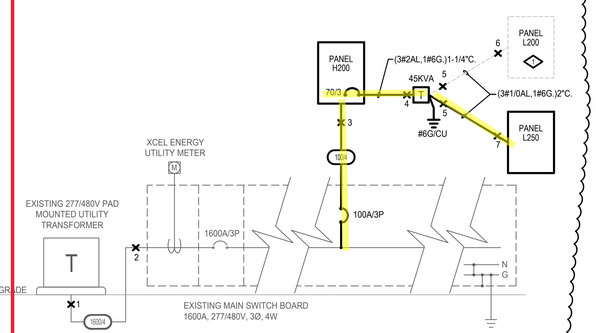
DESIGNED UNDER THE FOLLOWING CODES:
2020 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL EXISTING BUILDING CODE
2015 INTERNATIONAL FIRE CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE

ENERGY CODE NOTES:

1. THE LIGHTING AND ELECTRICAL SYSTEMS FOR THE PROJECT SHALL COMPLY WITH THE APPLICABLE SECTIONS OF 2021 IECC.
2. OCCUPANCY SENSORS SHALL BE PROVIDED AS REQUIRED FOR FULL COVERAGE OF THE AREA SHOWN. SPECIFIC NUMBER OF DEVICES AND MOUNTING LOCATIONS SHALL BE DETERMINED BY THE MANUFACTURER THAT IS SELECTED BY THE ELECTRICAL CONTRACTOR. LOCATIONS AND QUANTITIES OF SENSORS SHOWN ON THESE PLANS ARE FOR CONVEYING SWITCHING/CONTROL INTENT. PROVIDE ALL REQUIRED CONTROL UNITS AND ADD-A-RELAYS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

DETAIL NOTES

1 PANEL "L200" IS SHOWN FOR REFERENCE AS IT IS BEING DESIGNED CONCURRENTLY WITH THIS TENANT.



1 / E-001 EXISTING PARTIAL ELECTRICAL ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

NOTE:
1. ALL EQUIPMENT SHOWN LIGHT LINE WEIGHT ABOVE ON ONE-LINE DIAGRAM IS EXISTING TO REMAIN ALL EQUIPMENT SHOWN HEAVE LINE WEIGHT IS NEW.

ELECTRICAL CONSTRUCTION SPECIFICATION

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
3. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
5. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE FIRE PREVENTION BUREAU THE DOCUMENTS, INCLUDING DRAWINGS, REQUIRED TO OBTAIN APPROVAL OF EMERGENCY LIGHTING AND EXIT SIGN TYPES AND LOCATIONS. A COPY OF THE APPROVED DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT BEFORE THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL PREPARE THE DOCUMENTS, INCLUDING DRAWINGS, REQUIRED TO OBTAIN APPROVAL OF THE EQUIPMENT AND LOCATIONS OF THE DEVICES THAT COMPRISE THE BUILDING FIRE ALARM LIFE SAFETY SYSTEM. A COPY OF THE DRAWINGS AND CUT SHEETS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE APPROVED DRAWINGS WILL BE STAMPED, SIGNED AND RETURNED TO E.C. TO SUBMIT TO THE BUILDING DEPARTMENT.
9. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE TH

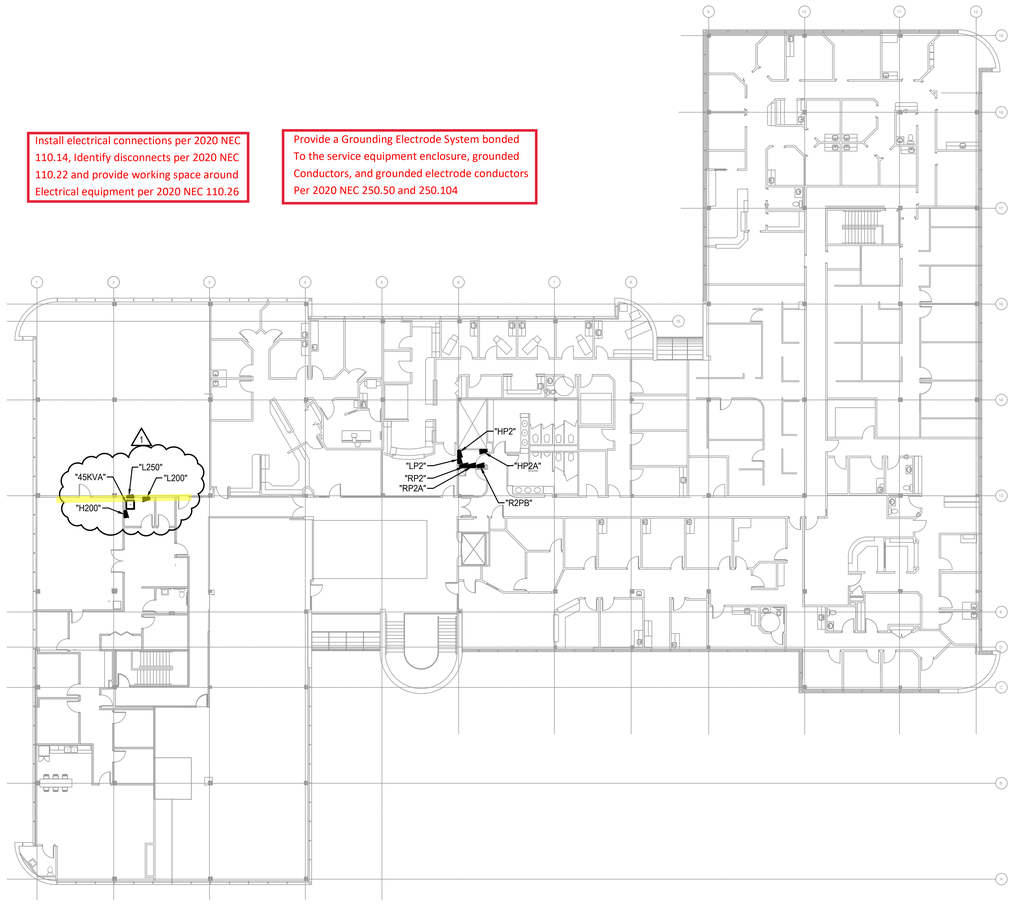
GENERAL NOTES

1. DEVICES SHOWN ON THIS PLAN ARE EXISTING AND SHOWN FOR REFERENCE.

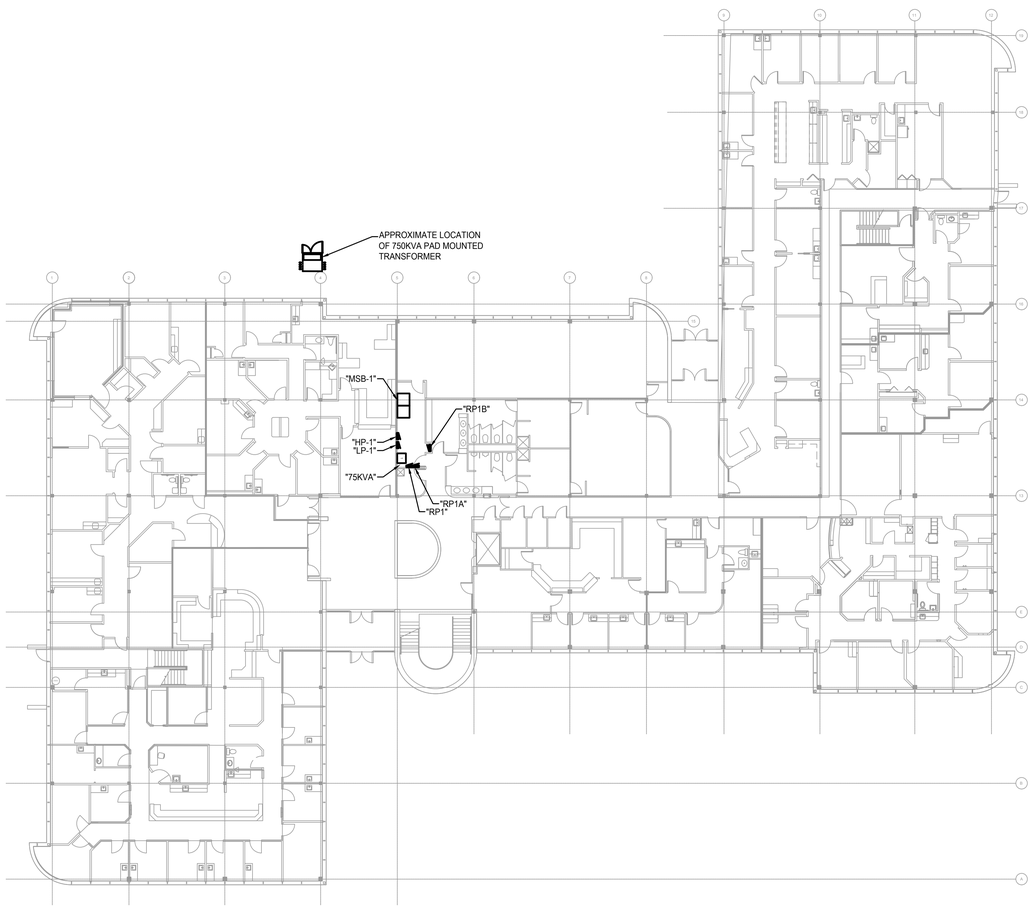
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: *Bobby McKinzie*
Date: *Nov 13, 2022*
2015 INTERNATIONAL CODES & 2020 NEC

Install electrical connections per 2020 NEC 110.14, Identify disconnects per 2020 NEC 110.22 and provide working space around Electrical equipment per 2020 NEC 110.26

Provide a Grounding Electrode System bonded To the service equipment enclosure, grounded Conductors, and grounded electrode conductors Per 2020 NEC 250.50 and 250.104



E2 **LEVEL 2 - OVERALL POWER PLAN**
1/8" = 1'-0"



E1 **LEVEL 1 - OVERALL POWER PLAN**
1/8" = 1'-0"

DAVIS PARTNERSHIP ARCHITECTS
Denver | 2901 Blake Street, Suite 100 Denver, CO 80205 303.861.8555
Virginia | 635 S. Fairfax Street Alexandria, VA 22314 703.838.8414
Consultant
MV CONSULTING INC
4640 PECOS STREET, UNIT F DENVER, COLORADO, 80211
303.325.3271 MV-C.NET

COLORADO LICENSED MARCUS T. VANLIER 41304 PROFESSIONAL ENGINEER 11/02/2022

Issuance	Date
CONSTRUCTION DOCUMENTS	08.10.2022

Revisions	Date	No.
FIELD REVISIONS	11/02/22	1

Project Information

Sundermeyer Family Practice
1400 S. Potomac, Suite 250
Aurora, CO 80012

Sheet Information

Sheet Title:
LEVELS ONE AND TWO - OVERALL POWER PLANS

Sheet Number:
E-100

MVC Project: 2022-056-00

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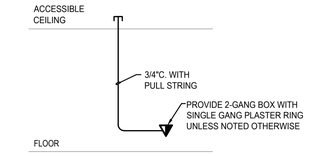
EQUIPMENT SCHEDULE										
KEY	EQUIPMENT	LOAD HP,KW,FLA	VOLTS	Ø	BRANCH CKT. CONDUCTORS	COND.	DISCONNECT SWITCH	DISCONNECT FUSE	PANEL	NOTES
EF-1	EXHAUST FAN	69.5 W	120	1	2#12,1#12G	1/2"	Sto	---	SEE PLANS	
TF-1	EXHAUST FAN	72.5 W	120	1	2#12,1#12G	1/2"	Sto	---	SEE PLANS	
NOTES:										

GENERAL NOTES

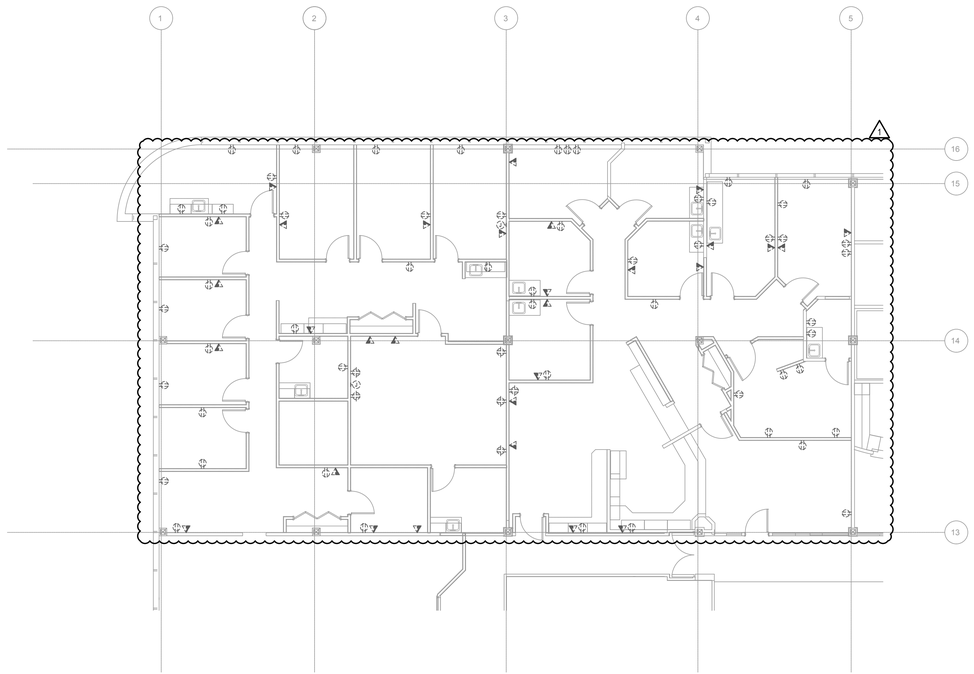
1. DEVICES SHOWN LIGHT LINE WEIGHT ARE EXISTING TO REMAIN, DEVICES SHOWN DASHED TO BE REMOVED, DEVICES SHOWN HEAVY ARE NEW.
2. ALL DEVICES ARE CIRCUITED TO PANEL "L250" UNLESS NOTED OTHERWISE.
3. COORDINATE FINAL LOCATIONS OF OUTLETS WITH THE ARCHITECT/TENANT PRIOR TO ROUGH-IN.
4. COORDINATE FINAL LOCATIONS AND QUANTITIES OF WIRELESS ACCESS POINTS "WAP" WITH TENANTS LOW VOLTAGE CONSULTANT.

DETAIL NOTES

1. GEAR IS SHOWN FOR REFERENCE AND LOCATED WITHIN SUITE 200.
2. THE INTENT IS TO HAVE PANEL "L250" RECESSED WITHIN WALL, CONTRACTOR SHALL INFORM THE ARCHITECT AND ENGINEER IF THE FIELD CONDITIONS WILL NOT ALLOW FOR PANEL TO BE RECESSED.
3. NOT USED.

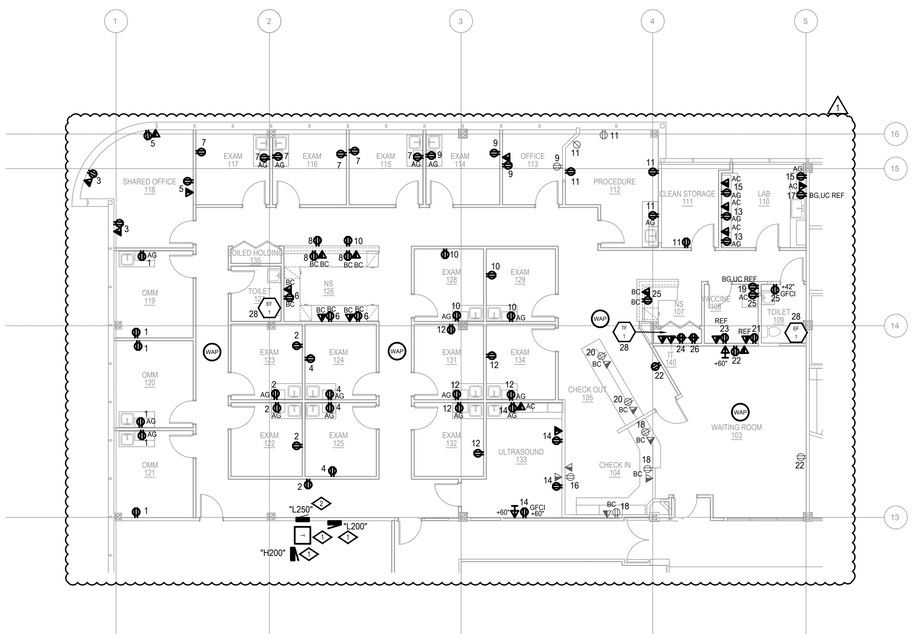


E3 TELE/DATA OUTLET INSTALLATION DETAIL
NO SCALE



E2 LEVEL 2 SUITE 250 - DEMO POWER PLAN
1/8" = 1'-0"

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



E1 LEVEL 2 SUITE 250 - NEW POWER PLAN
1/8" = 1'-0"

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Aurora, CO 80012

Sheet Information

Sheet Title:
LEVEL TWO - POWER PLANS - NEW AND DEMO

Sheet Number:
E-102

MVC Project: 2022-056-00

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