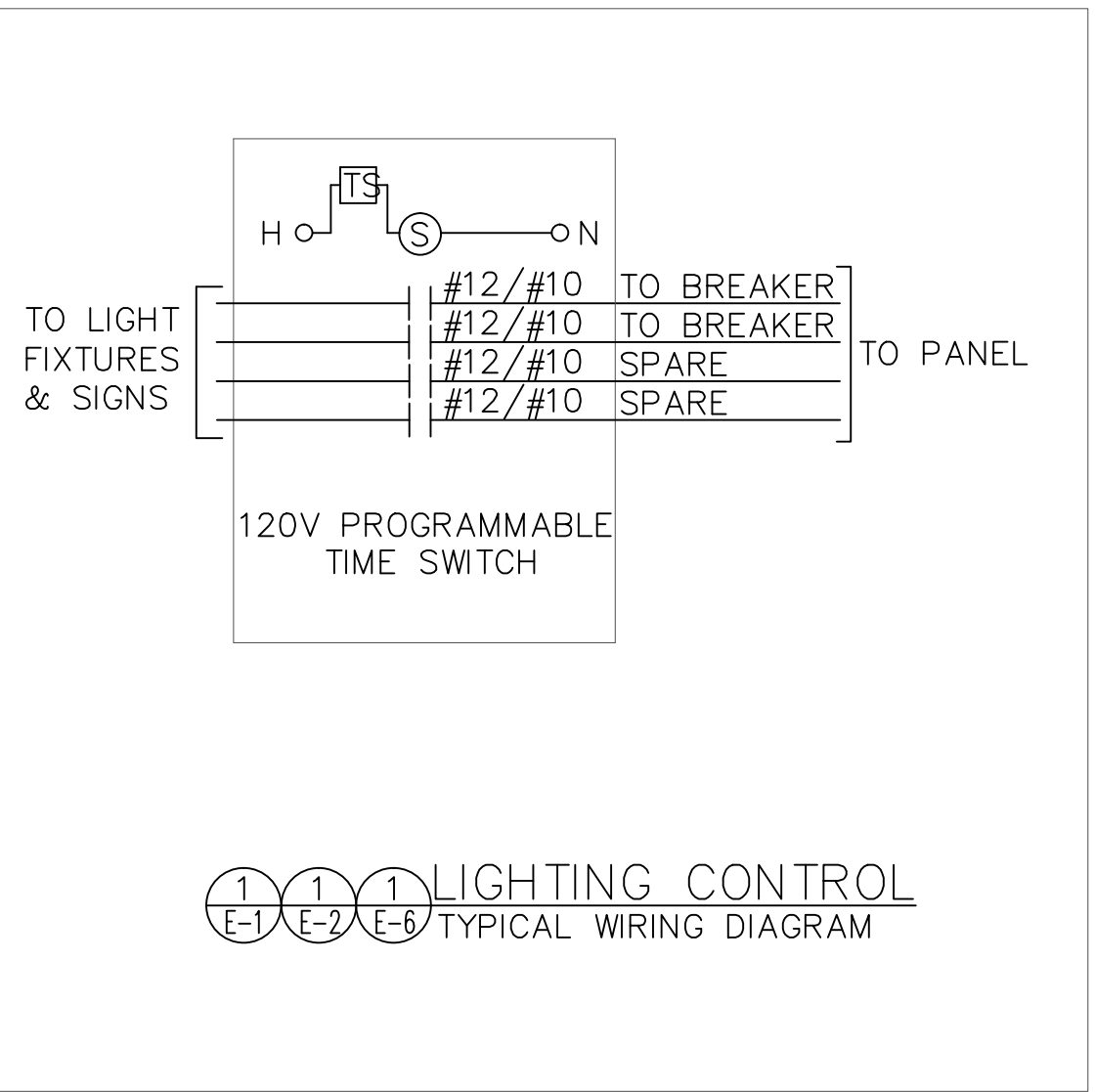
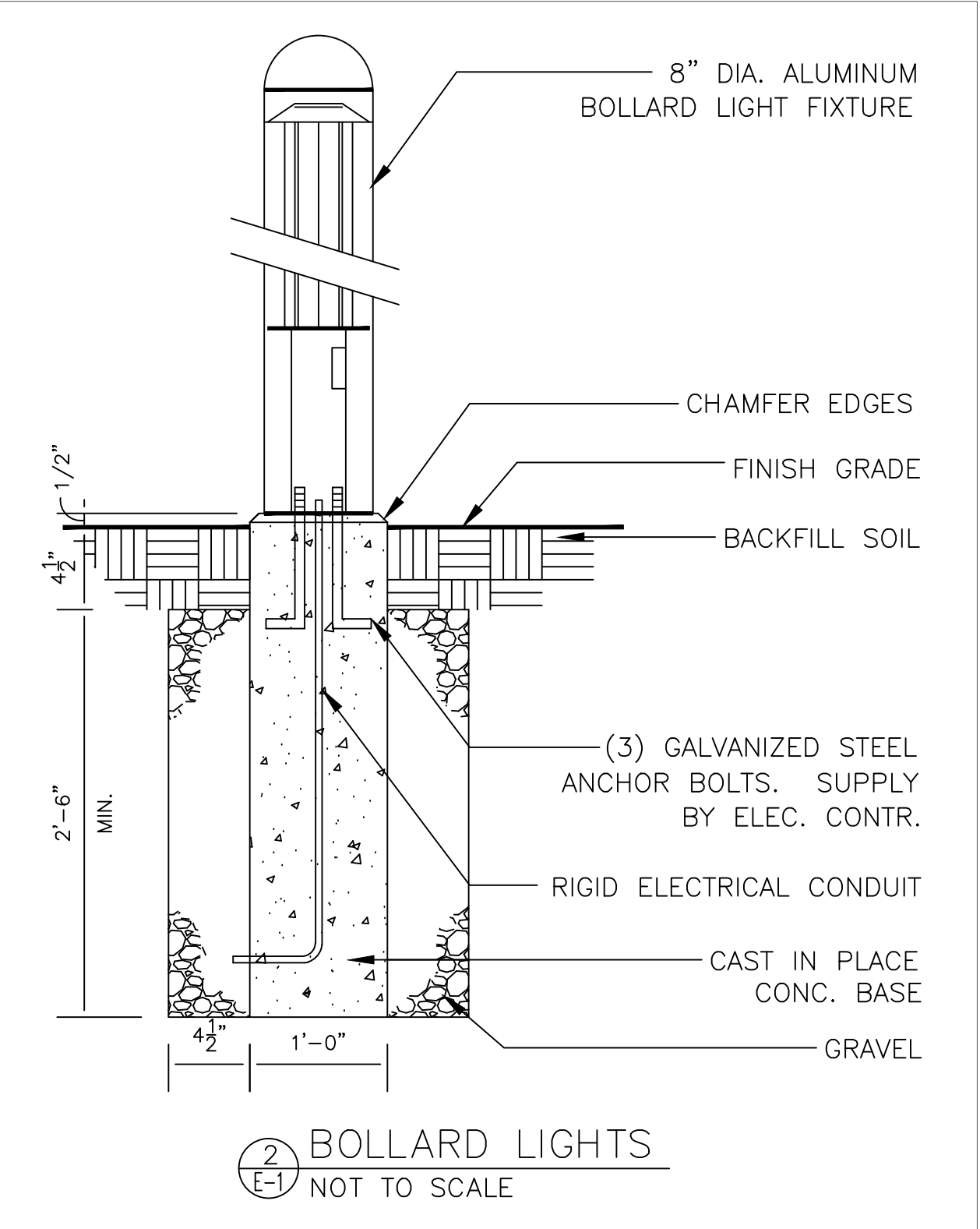


GENERAL NOTES:

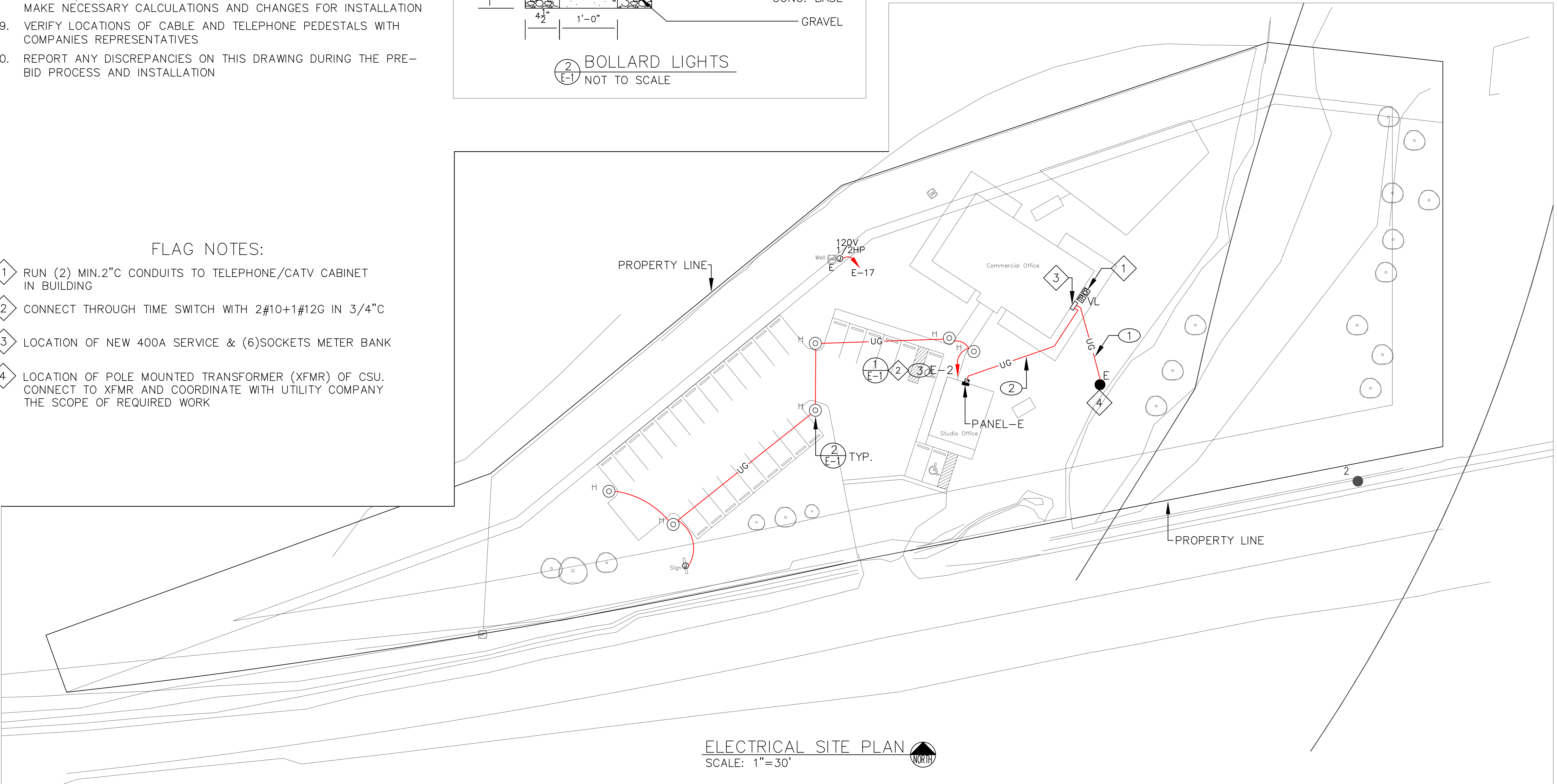
- COORDINATE INSTALLATION OF ALL ELECTRICAL EQUIPMENT AND DEVICES WITH ALL OTHER TRADES
- ALL OUTDOOR INSTALLED EQUIPMENT, CABINETS AND DEVICES SHOULD HAVE AT LEAST NEMA 3R ENCLOSURE
- SIZES OF CONDUCTORS BASED ON 75°F RATED TERMINALS. IF TERMINALS ARE RATED DIFFERENTLY, SEE NEC110.14(C)(1)
- ALL OUTDOOR UNDERGROUND SECONDARY CONDUITS SHOULD BE PVC SCHEDULE 40 AND MIN. 24" BELOW GRADE
- ELECTRICAL CONTRACTOR IS RESPONSIBLE:
 - TO PROVIDE ALL REQUIRED MATERIALS AND SCOPE OF WORK IN ACCORDANCE WITH LUC CURRENT STANDARDS
 - SUBMIT LOAD DATA FORM AND ALL NECESSARY FINAL DRAWINGS TO LUC ENGINEER
 - COORDINATE INSTALLATION & LOCATION OF TRANSFORMER AND OTHER WITH LUC REPRESENTATIVE & ARCHITECT PLANS
 - PROVIDE CLEARANCES ACCORDING TO LUC STANDARDS
 - SCHEDULE REGIONAL BUILDING & UTILITY CO. INSPECTIONS.
 - VERIFY SEQUENCE OF PHASES FOR EACH SERVICE OF BUILDING WITH LUC REPRESENTATIVE
- DO NOT INSTALL OUTDOOR ELECTRICAL EQUIPMENT UNDER THE WATER FLOW GUTTER
- PROVIDE BEDDING & COMPACTING FOR ALL DESIGNED CONDUITS OR CABLES
- WIRE FILL CALCULATION IS BASED ON THWN/XHHW TYPE OF WIRES FOR PVC/EMT. IF OTHER TYPE WIRES OR CONDUITS ARE USED, MAKE NECESSARY CALCULATIONS AND CHANGES FOR INSTALLATION
- VERIFY LOCATIONS OF CABLE AND TELEPHONE PEDESTALS WITH COMPANIES REPRESENTATIVES
- REPORT ANY DISCREPANCIES ON THIS DRAWING DURING THE PRE-BID PROCESS AND INSTALLATION



FEEDER SCHEDULE	
KEY	DESCRIPTION
①	CU - 3#500 IN 3"C
②	CU - 3#1+#6G IN 2"C
③	CU - 2#10+#12G IN 1"C

FLAG NOTES:

- RUN (2) MIN. 2" C CONDUITS TO TELEPHONE/CATV CABINET IN BUILDING
- CONNECT THROUGH TIME SWITCH WITH 2#10+1#12G IN 3/4" C
- LOCATION OF NEW 400A SERVICE & (6) SOCKETS METER BANK
- LOCATION OF POLE MOUNTED TRANSFORMER (XFMR) OF CSU. CONNECT TO XFMR AND COORDINATE WITH UTILITY COMPANY THE SCOPE OF REQUIRED WORK





GSM Engineering
9990 Highland Glen Place,
Colorado Springs, CO 80920
Cell: (719) 238-0946
E-mail: gsm.engr@gmail.com

AFFINITY ENGINEERING, LLC
7887 EAST BELLEVUE AVENUE
ENGLEWOOD, CO 80111
PHONE: 719-306-3411

JOHN HOTCHKISS
COMMERCIAL OFFICE
2290 OLD RANCH ROAD
COLORADO SPRINGS, CO

Project: 1905-05
Date: 9-10-2019
Design: GM
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Revisions:

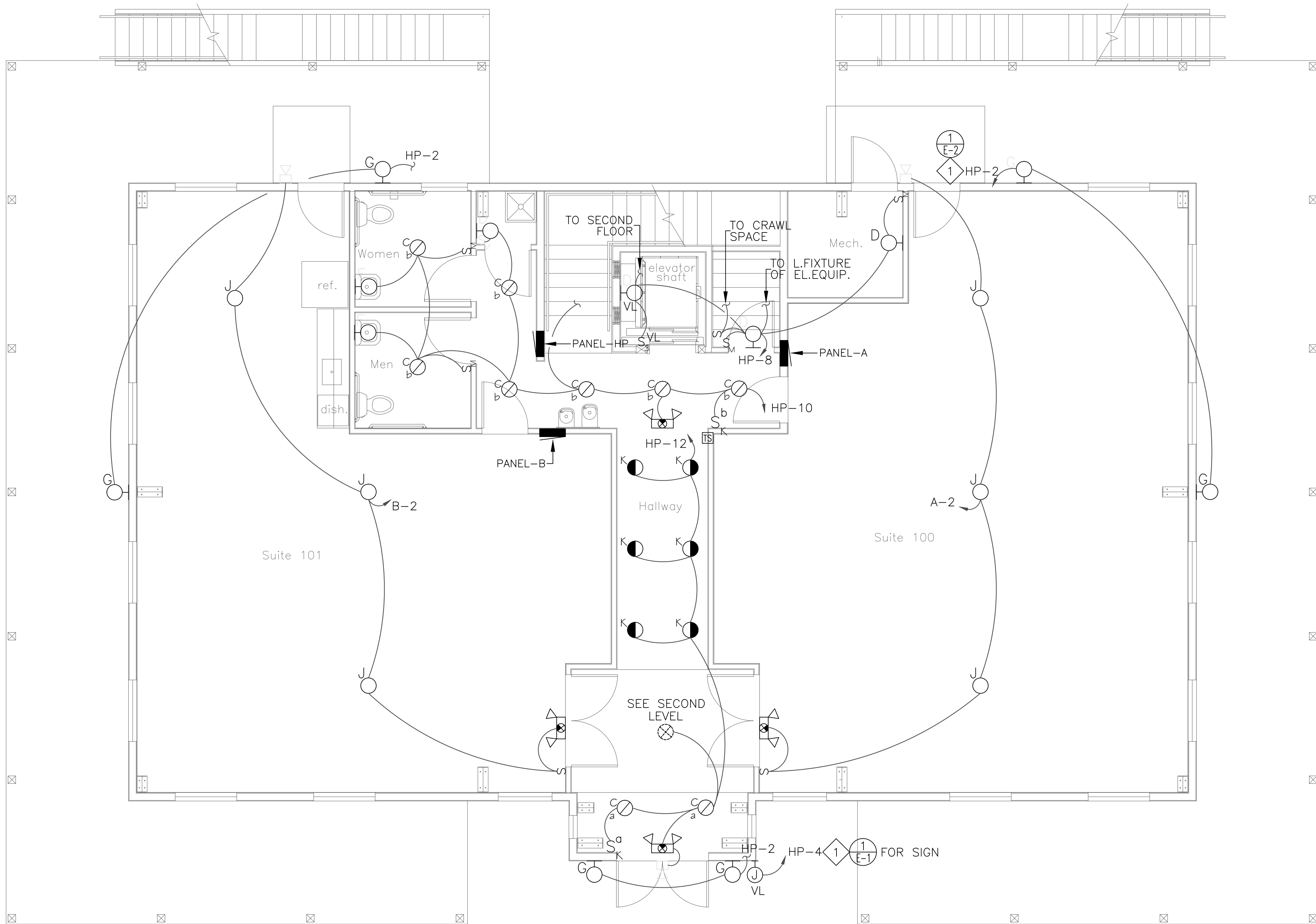
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GENERAL NOTES:

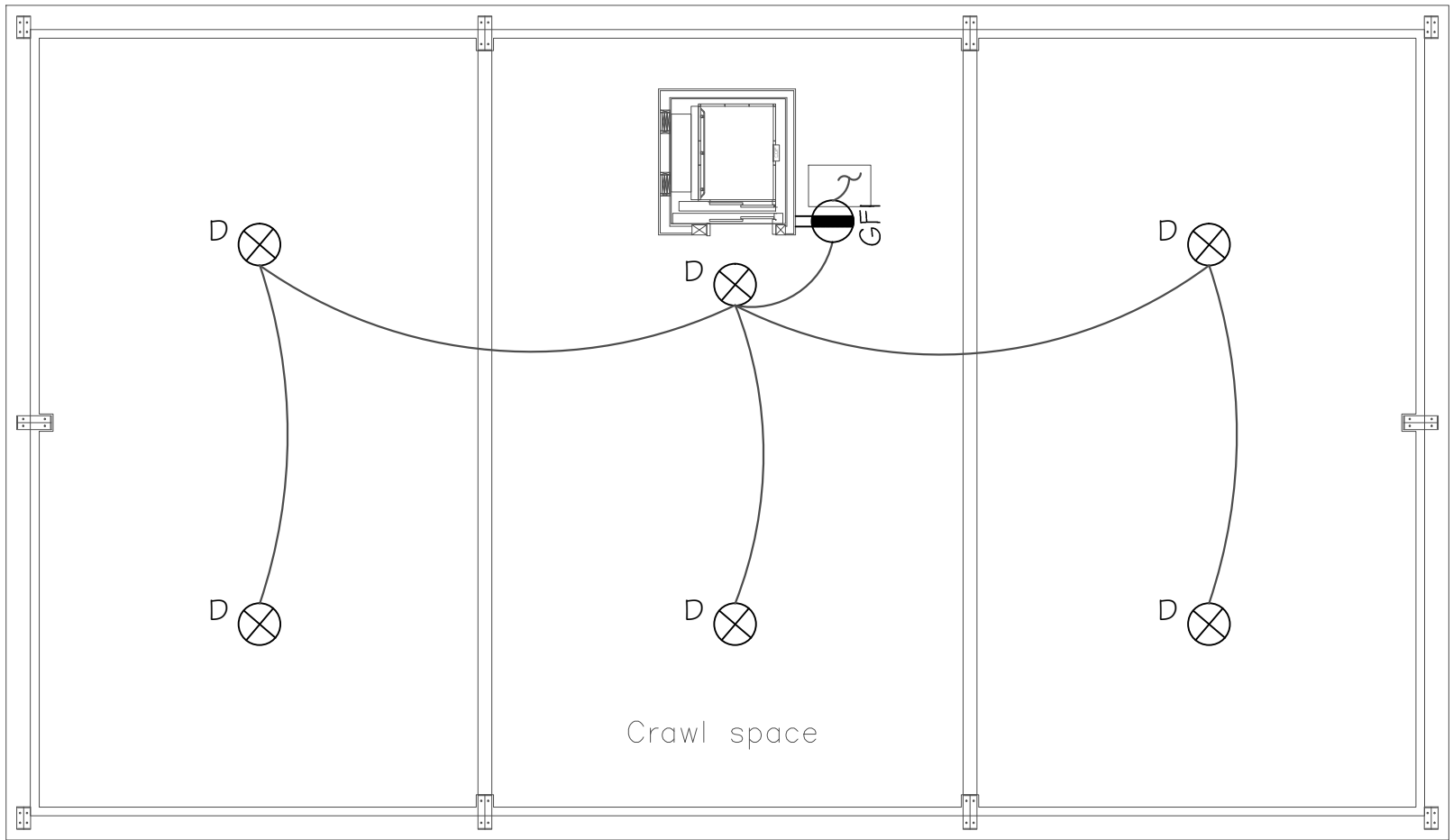
- COORDINATE INSTALLATION OF ALL ELECTRICAL EQUIPMENT & DEVICES WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES
- ALL OUTDOOR INSTALLED EQUIPMENT, CABINETS AND DEVICES SHALL BE WP AND HAVE AT LEAST NEMA 3R RATED ENCLOSURES
- IF REQUIRED, MAKE ALL NECESSARY CHANGES TO THIS DRAWING AND COORDINATE THEM WITH ELECTRICAL ENGINEER
- REPORT ANY DISCREPANCIES ON THIS DRAWING BEFORE THE BID AND INSTALLATION

FLAG NOTES:

- 1 CONNECT OUTDOOR FIXTURES THROUGH THE TIME SWITCH



FIRST FLOOR. LIGHTING PLAN
SCALE: 1/4"=1'



ELECTRICAL PLAN
SCALE: 1/8"=1'

NEMA RATED ENCLOSURE: NEMA 3R			Meter Bank				FED FROM: Utility Transformer									
VOLTAGE: PHASES & WIRES: MAIN BRKR, AMP: LUGS ONLY, AMP:			120 60Hz		240 1PH3W 400		MOUNTED: <div>Surface</div>		MIN. AIC RATINGS: <div>22,000A</div>		PROJECT: 2290 Old Ranch Road, Colorado S. CO GSM JOB #: 1905-05 DESIGN BY: GM NOTES:					
#	BR.	DESCRIPTION	MOTOR	RECEPT.	LIGHTING	HEATER	OTHER	PH	OTHER	HEATER	LIGHTING	RECEPT.	MOTOR	DESCRIPTION	BR.	#
1	125/	Panel-A	4,100		30			A		1,200	30	180	4,400	Panel-B	125/	2
3	2	"	2,520	180				B					1,500	"	2	4
5	125/	Panel-C	4,100		30			A			30		4,100	Panel-D	125/	6
7	2	"	2,520	180				B				180	2,520	"	2	8
9	125/	Panel-E	2,970	1,920	750	1,940		A	500	1,500	520	1,080	6,950	Panel-HP	125/	10
11	2	"	3,120	1,440	1,220			B	720	1,000	1,500	1,440	5,530	"	2	12
13								A								14
15								B								16
17								A								18
19								B								20
21								A								22
23								B								24

DESCRIPTION:	PH A:	PH B:	TOTAL:	DEMAND:	DEMAND:
	(KVA)	(KVA)	(KVA)	(FACTOR)	(KVA)
	↓	↓	↓	↓	↓
MOTORS:	26.57	19.53	46.10	100%	46.10
LARGEST MOTOR:				125%	0.00
RECEPTACLES UP TO 10 KVA:	3.18	4.92	8.10	100%	8.10
RECEPTACLES OVER 10 KVA:			0.00	50%	0.00
LIGHTING:	1.39	2.72	4.11	125%	5.14
HEATERS:	4.64	1.00	5.64	100%	5.64
OTHER:	0.50	0.72	1.22	100%	1.22

CONNECTED LOAD SUMMARY:	
(PHASE)	(KVA)
PH A:	36.28
PH B:	28.89
TOTAL:	65.17

DEMAND IN KVA:

66.19

DEMAND IN AMP:

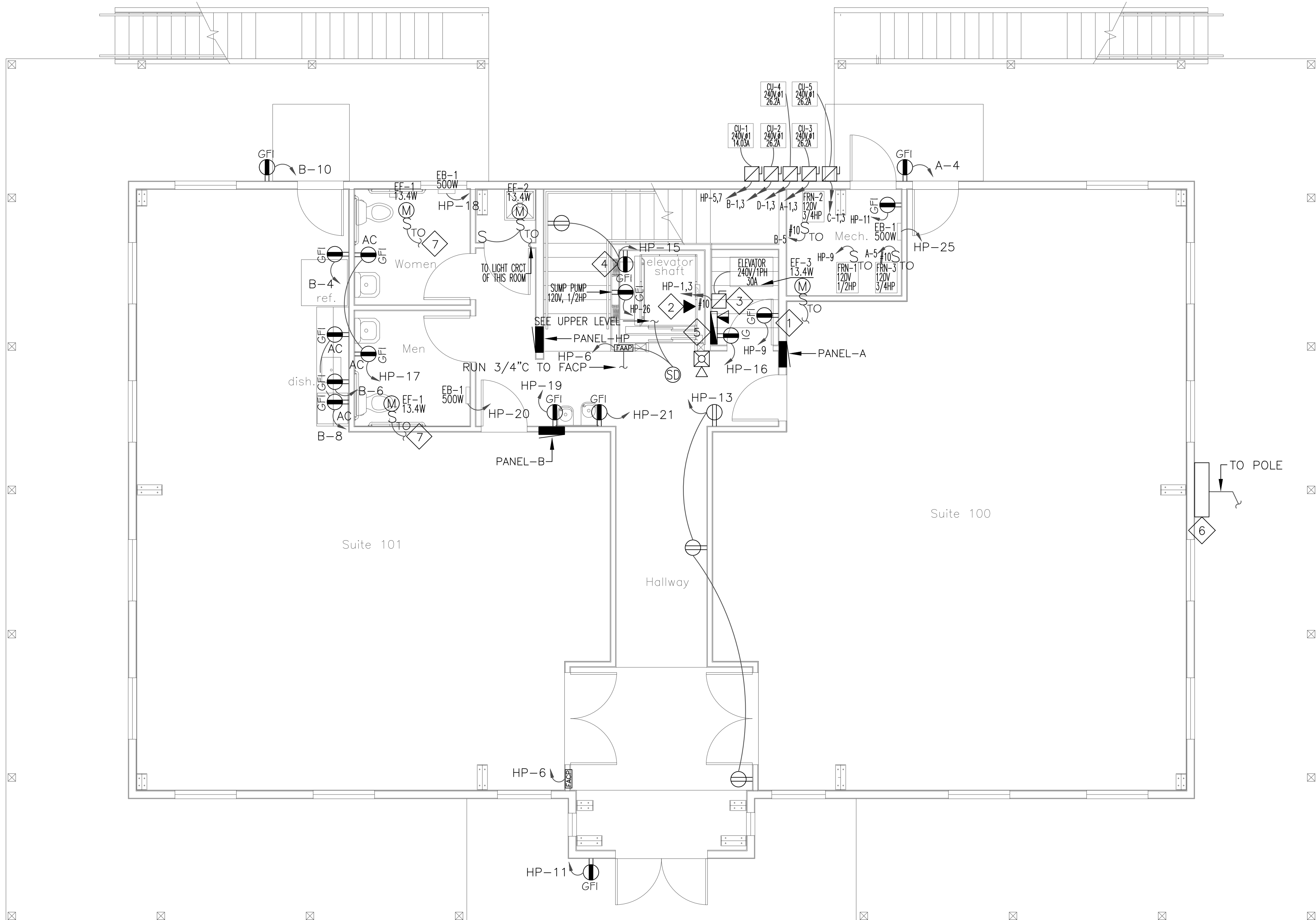
275.81

GENERAL NOTES:

- COORDINATE INSTALLATION OF ALL ELECTRICAL EQUIPMENT & DEVICES WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES
- ALL OUTDOOR INSTALLED EQUIPMENT, CABINETS AND DEVICES SHALL BE WP AND HAVE AT LEAST NEMA 3R RATED ENCLOSURES
- IF REQUIRED, MAKE ALL NECESSARY CHANGES TO THIS DRAWING AND COORDINATE THEM WITH ELECTRICAL ENGINEER
- VERIFY WHICH FURNACE (FRN) & CONDENSING UNIT (CU) SERVING WHICH AREA
- REPORT ANY DISCREPANCIES ON THIS DRAWING BEFORE THE BID AND INSTALLATION

FLAG NOTES:

- CONNECT TO LIGHT CIRCUIT OF ELEVATOR ROOM. SHALL BE CONTROLLED FROM THERMOSTAT
- CONNECT THE TELEPHONE CIRCUIT OF ELEVATOR TO TELEPHONE CIRCUIT OF THE BUILDING
- COORDINATE REQUIREMENTS WITH ELEVATOR SUPPLIER. PROVIDE ALL REQUIRED EQUIPMENT, DEVICES, ADDITIONAL CIRCUITS, INTERCONNECTIONS AND OTHER
- INSTALL RECEPTACLE IN ELEVATOR PIT. CONNECT TO LIGHT CIRCUIT OF ELEVATOR SHAFT
- PROVIDE TELEPHONE, CATV & DATA CABINET. INSTALL BRIDGED TELEPHONE BOARDS & DSL FILTER BOARD IN IT. INSTALL IG & 120V RECEPTACLES INSIDE OR NEXT TO THE CABINET. COORDINATE REQUIREMENTS WITH TELEPH/CABLE/DATA SPECIALIST. IF SPACE FOR CABINET IS NOT ENOUGH, COORDINATE WITH OWNER
- LOCATION OF NEW 400A SERVICE & (6) SOCKETS METER BANK
- SHALL BE CONNECT/CONTROLLED BY LIGHT CIRCUIT OF THIS ROOM



FIRST FLOOR. POWER PLAN
SCALE: 1/4"=1'

NEMA RATED ENCLOSURE: NEMA 1				PANEL-B								FED FROM: 400A Meter bank				
VOLTAGE: 120 240 PHASES & WIRES: 60Hz 1PH3W MAIN BRKR, AMP: 125 LUGS ONLY, AMP: 125				MOUNTED: Recessed				PROJECT: 2290 Old Ranch Road, Colorado S. CO GSM JOB #: 1905-05 DESIGN BY: GM NOTES:								
#	BR.	DESCRIPTION	MOTOR	RECEPT.	LIGHTING	HEATER	OTHER	PH	OTHER	HEATER	LIGHTING	RECEPT.	MOTOR	DESCRIPTION	BR.	#
1	40/	CU-2	2,515					A			30			Lighting	20	2
3	2	-	2,515					B					800	Refrigerator	20	4
5	25	FRN-2	1,590					A		1,200			300	Dishwasher	20	6
7	20	Spare						B				1,500		Appliances	20	8
9	20	Spare						B				180		Receptacle - outdoor	20	10
11	20	Spare						B						Space	20	12
13	20	Space						A						Space	20	14
15	20	Space						B						Space	20	16
17	20	Space						A						Space	20	18
19	20	Space						B						Space	20	20
21	20	Space						A						Space	20	22
23	20	Space						B						Space	20	24

DESCRIPTION:	PH A: (KVA)	PH B: (KVA)	TOTAL: (KVA)	DEMAND: (FACTOR)	DEMAND: (KVA)
	↓	↓	↓	↓	↓
MOTORS:	4.40	3.32	7.71	100%	7.71
LARGEST MOTOR:				125%	0.00
RECEPTACLES UP TO 10 KVA:	0.18	1.50	1.68	100%	1.68
RECEPTACLES OVER 10 KVA:			0.00	50%	0.00
LIGHTING:	0.03	0.00	0.03	125%	0.04
HEATERS:	1.20	0.00	1.20	100%	1.20
OTHER:	0.00	0.00	0.00	100%	0.00

CONNECTED LOAD SUMMARY:	
(PHASE)	(AMP)
↓	↓
PH A:	5.61 48.39
PH B:	4.82 40.13
TOTAL:	10.62 44.26

DEMAND IN KVA: 10.63

DEMAND IN AMP: 44.29

NEMA RATED ENCLOSURE: NEMA 1			PANEL-A										FED FROM: 400A Meter bank			
VOLTAGE: PHASES & WIRES: MAIN BRKR, AMP: LUGS ONLY, AMP:			<div>120</div> <div>60Hz</div>	<div>240</div> <div>1PH3W</div> <div>125</div>	MOUNTED: <div>Recessed</div>			MIN. AIC RATING: <div>15,000A</div>			PROJECT: 2290 Old Ranch Road, Colorado S. CO GSM JOB #: 1905-05 DESIGN BY: GM NOTES:					
#	BR.	DESCRIPTION	MOTOR	RECEPT.	LIGHTING	HEATER	OTHER	PH	OTHER	HEATER	LIGHTING	RECEPT.	MOTOR	DESCRIPTION	BR.	#
1	40/	CU-3	2,515					A				27		Lighting	20	2
3	2	-	2,515					B					180	Receptacle - outdoor	20	4
5	25	FRN-3	1,590					A						Space	20	6
7	20	Spare						B						Space	20	8
9	20	Spare						A						Space	20	10
11	20	Spare						B						Space	20	12
13		Space						A						Space	20	14
15		Space						B						Space	20	16
17		Space						A						Space	20	18
19		Space						B						Space	20	20
21		Space						A						Space	20	22
23		Space						B						Space	20	24

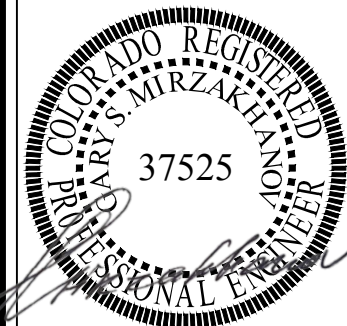
DESCRIPTION:	PH A: (KVA)	PH B: (KVA)	TOTAL: (KVA)	DEMAND: (FACTOR)	DEMAND: (KVA)	CONNECTED LOAD SUMMARY:					
	↓	↓			↓	(PHASE)	(KVA)	(AMP)			
MOTORS:	4.10	2.52	6.61	100%	6.61	PH A:	4.12	34.37			
LARGEST MOTOR:			125%		0.00	PH B:	2.70	22.46			
RECEPTACLES UP TO 10 KVA:	0.00	0.18	0.18	100%	0.18	TOTAL:	6.82	28.41			
RECEPTACLES OVER 10 KVA:			0.00	50%	0.00						
LIGHTING:	0.03	0.00	0.03	125%	0.03						
HEATERS:	0.00	0.00	0.00	100%	0.00						
OTHER:	0.00	0.00	0.00	100%	0.00						

DEMAND IN KVA:

6.83

DEMAND IN AMP:

28.44

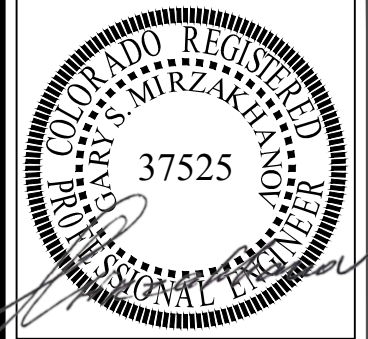


GSM Engineering
9990 Highland Glen Place,
Colorado Springs, CO 80920
Cell: (719) 238-0946
E-mail: gsm.engin@gmail.com

AFFINITY ENGINEERING, LLC
7887 EAST BELLEVUE AVENUE
ENGLEWOOD, CO 80111
PHONE: 719-306-3411

JOHN HOTCHKISS
COMMERCIAL OFFICE
2290 OLD RANCH ROAD
COLORADO SPRINGS, CO

Project: 1905-05
Date: 9-10-2019
Design: GM
Drawn: GM
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Revisions:



GSM Engineering
9990 Highland Glen Place,
Colorado Springs, CO 80920
Cell: (719) 238-0946
E-mail: gsm.engn@gmail.com

AFFINITY ENGINEERING, LLC
7887 EAST BELLEVUE AVENUE
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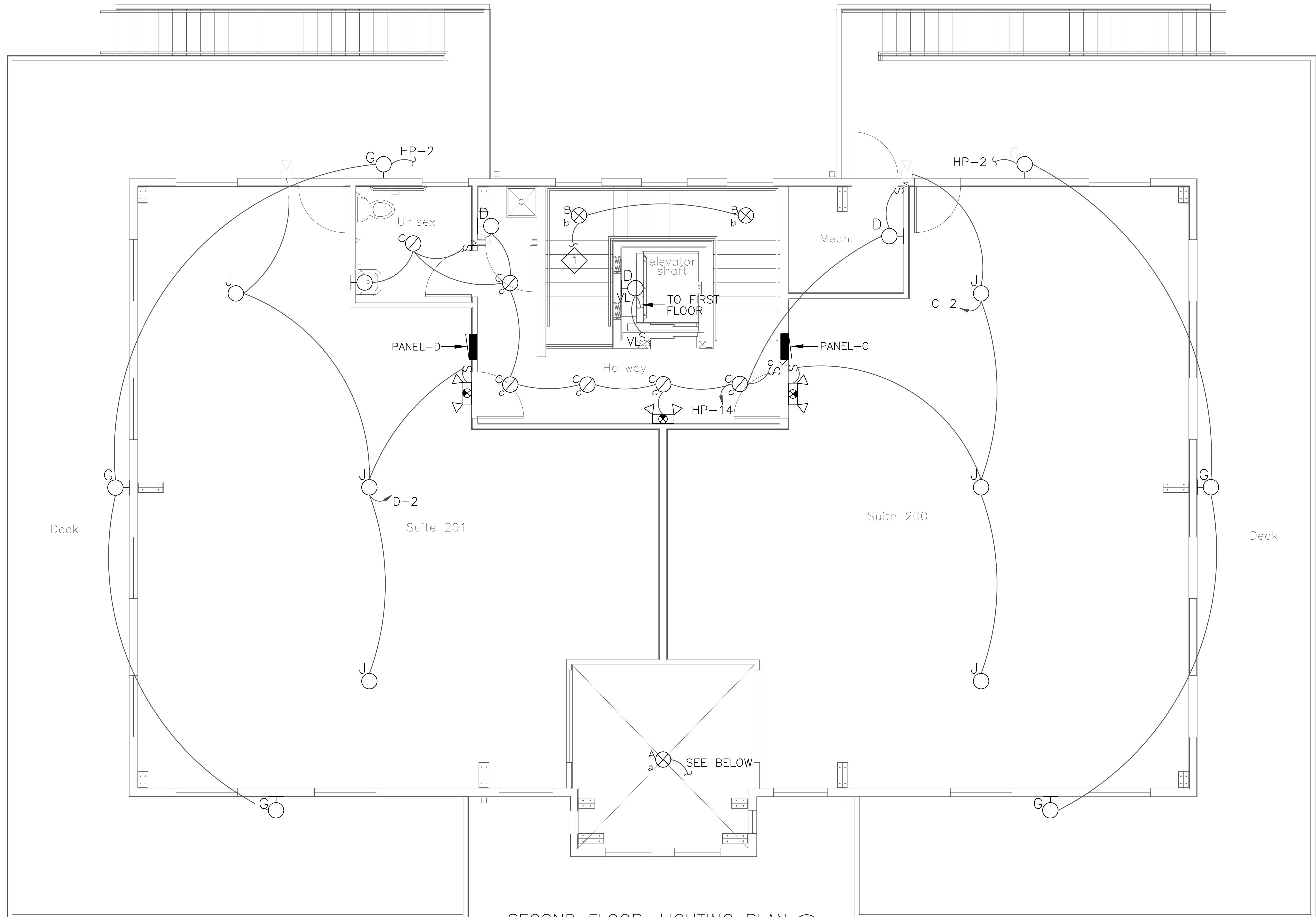
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GENERAL NOTES:

- COORDINATE INSTALLATION OF ALL ELECTRICAL EQUIPMENT & DEVICES WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES
- ALL OUTDOOR INSTALLED EQUIPMENT, CABINETS AND DEVICES SHALL BE WP AND HAVE AT LEAST NEMA 3R RATED ENCLOSURES
- IF REQUIRED, MAKE ALL NECESSARY CHANGES TO THIS DRAWING AND COORDINATE THEM WITH ELECTRICAL ENGINEER
- REPORT ANY DISCREPANCIES ON THIS DRAWING BEFORE THE BID AND INSTALLATION

FLAG NOTES:

1 TO LIGHTING FIXTURES OF LOWER LEVEL PLAN



SECOND FLOOR. LIGHTING PLAN
SCALE: 1/4"=1'

NEMA RATED ENCLOSURE:			NEMA 1		PANEL-D										FED FROM: 400A Meter bank			
VOLTAGE: PHASES & WIRES: MAIN BRKR, AMP: LUGS ONLY, AMP:			120 240 60Hz 1PH3W		MOUNTED: <div>Recessed</div>					PROJECT: 2290 Old Ranch Road, Colorado S. CO GSM JOB #: 1905-05 DESIGN BY: GM NOTES:								
					MIN. AIC RATING: <div>15,000A</div>													
#	BR	DESCRIPTION	MOTOR	RECEPT.	LIGHTING	HEATER	OTHER	PH	OTHER	HEATER	LIGHTING	RECEPT.	MOTOR	DESCRIPTION	BR	#		
1	40/	CU-4	2.515					A				30		Lighting	20	2		
3	2	-	2.515					B					180	Receptacle - outdoor	20	4		
5	25	FRN-4	1.590					A						Spare	20	6		
7	20	Spare						B						Spare	20	8		
9	20	Spare						A						Space		10		
11	20	Spare						B						Space		12		
13		Space						A						Space		14		
15		Space						B						Space		16		
17		Space						A						Space		18		
19		Space						B						Space		20		
21		Space						A						Space		22		
23		Space						B						Space		24		

DESCRIPTION:	PH A: (KVA)	PH B: (KVA)	TOTAL: (KVA)	DEMAND: (FACTOR)	DEMAND: (KVA)
	↓	↓	↓	↓	↓
MOTORS:	4.10	2.52	6.61	100%	6.61
LARGEST MOTOR:				125%	0.00
RECEPTACLES UP TO 10 KVA:	0.00	0.18	0.18	100%	0.18
RECEPTACLES OVER 10 KVA:			0.00	50%	0.00
LIGHTING:	0.03	0.00	0.03	125%	0.04
HEATERS:	0.00	0.00	0.00	100%	0.00
OTHER:	0.00	0.00	0.00	100%	0.00

CONNECTED LOAD SUMMARY:		
(PHASE)	(KVA)	(AMP)
↓	↓	↓
PH A:	4.13	34.39
PH B:	2.70	22.46
TOTAL:	6.82	28.42

DEMAND IN KVA:

6.83

DEMAND IN AMP:

28.46

NEMA RATED ENCLOSURE:			NEMA 1			PANEL-C			FED FROM: 400A Meter bank							
VOLTAGE: PHASES & WIRES: MAIN BRKR, AMP: LUGS ONLY, AMP:			<div>120</div> <div>60Hz</div>	<div>240</div> <div>1PH3W</div> <div>125</div>	MOUNTED: <div>Recessed</div>			PROJECT: 2290 Old Ranch Road, Colorado S. CO GSM JOB #: 1905-05 DESIGN BY: GM NOTES:								
			MIN. AIC RATING: <div>15,000A</div>													
#	BR	DESCRIPTION	MOTOR	RECEPT.	LIGHTING	HEATER	OTHER	PH	OTHER	HEATER	LIGHTING	RECEPT.	MOTOR	DESCRIPTION	BR	#
1	40/	CU-5	2.515					A			30			Lighting	20	2
3	2	-	2.515					B				180		Receptacle - outdoor	20	4
5	25	FRN-	1.590					A						Spare	20	6
7	20	Spare						B						Spare	20	8
9	20	Spare						A						Space		10
11	20	Spare						B						Space		12
13		Space						A						Space		14
15		Space						B						Space		16
17		Space						A						Space		18
19		Space						B						Space		20
21		Space						A						Space		22
23		Space						B						Space		24

DESCRIPTION:		PH A:	PH B:	TOTAL:	DEMAND:	DEMAND:	
		(KVA)	(KVA)	(KVA)	(FACTOR)	(KVA)	
		↓	↓	↓	↓	↓	
MOTORS:		4.10	2.52	6.61	100%	6.61	
LARGEST MOTOR:					125%	0.00	
RECEPTACLES UP TO 10 KVA:		0.00	0.18	0.18	100%	0.18	
RECEPTACLES OVER 10 KVA:				0.00	50%	0.00	
LIGHTING:		0.03	0.00	0.03	125%	0.04	
HEATERS:		0.00	0.00	0.00	100%	0.00	
OTHER:		0.00	0.00	0.00	100%	0.00	

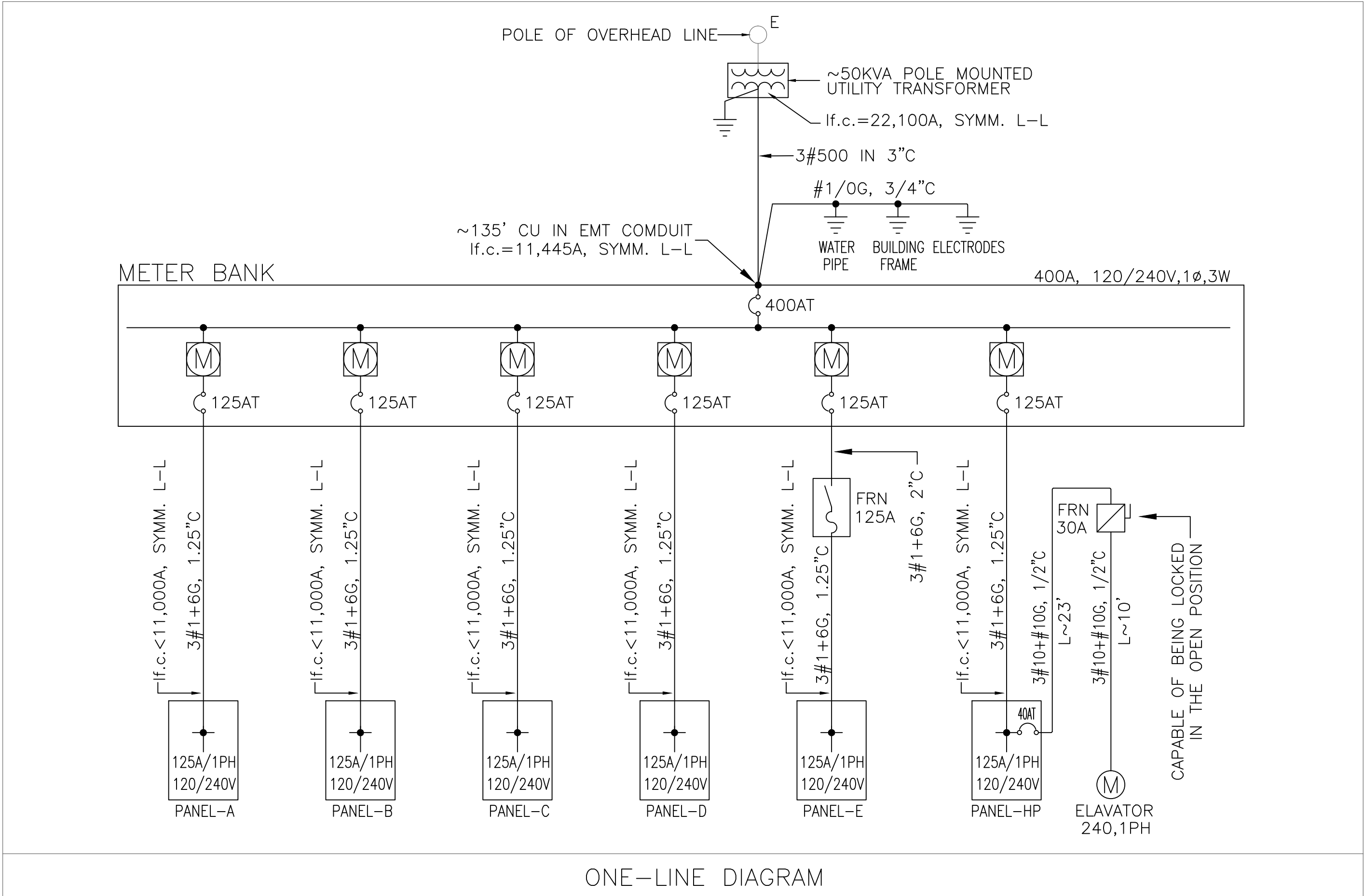
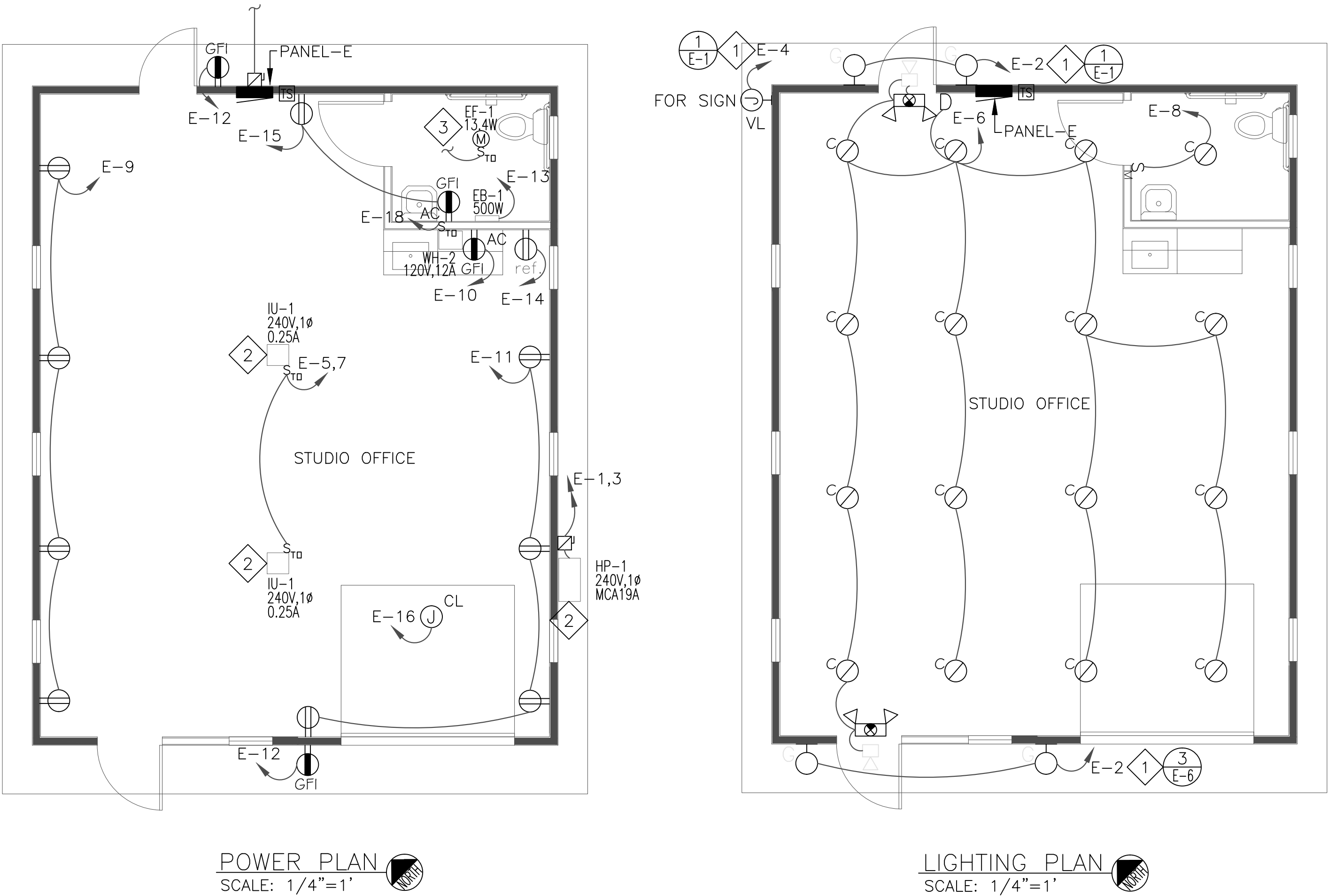
CONNECTED LOAD SUMMARY:	
(PHASE)	(KVA)
↓	↓
PH A:	4.13
PH B:	2.70
TOTAL:	6.82

DEMAND IN KVA:	6.83
DEMAND IN AMP:	28.46

LIGHT FIXTURES SCHEDULE								
TYPE	SPECIFICATION		VOLT	QTY	LAMPS	TRIM OR FINISH	MOUNTING	DESCRIPTION
	MANUFACTURER	CATALOG #			SPEC			
A	PROVIDED BY OWNER	PROVIDED BY OWNER	120	6	11W LED 1000LM	BY OWNER	SUSPENDED	CUSTOM CHANDELIER
B	PROVIDED BY OWNER	PROVIDED BY OWNER	120	3	11W LED 1000LM	BY OWNER	SUSPENDED	CUSTOM CHANDELIER
C	NICOR LIGHTING OR EQUIVALENT	DCR561200	120	1	14.5W LED 1200LM	WHITE	RECESSED	6"D DOWNLIGHT. 4000K. DIMMABLE
D	PROGRESS OR EQUIVALENT	P3605-30	120	1	9W LED 900LM	WHITE	SURFACE	WALL SCONCE. PROVIDE LED LAMPS
F	PROGRESS OR EQUIVALENT	P2991-74	120	2	9W LED 900LM	DARK BRONZE	WALL MNTD OVER THE MIRROR	VANITY FIXTURE. PROVIDE LED LAMPS
G	E-CONOLIGHT OR EQUIVALENT	E-WW1L	120	1	22W LED 5000LM	BLACK	SURFACE	OUTDOOR WALL PACK. 4000K
H	WILLIAMS LIGHTING	BOL-008	120	1	21W LED 4000K	BLACK	BASE MOUNTED	DOME TOP 8" ROUND BOLLARD. ANCHOR BOLTS AND WITHOUT DIMMING OPTION. PROVIDE CONCRETE BASE AND ACCESSORIES
J	LEVITON	9874	120	1	9W LED 900LM	WHITE	SURFACE	LAMPHOLDER. PROVIDE LED LAMP
K	HALO OR EQUIVALENT	SLD405	120	1	12W LED 1200LM	WHITE	RECESSED	6"D WALLWASHER. 4000K. DIMMABLE
M	E-CONOLIGHT OR EQUIVALENT	E-XML5WZ	120	1	2.5W LED	BRONZE	SURFACE ABOVE DOOR	EMERGENCY LIGHT FOR WET LOCATION
N	E-CONOLIGHT OR EQUIVALENT	E-XCL2RW	120	2	2.1W LED	WHITE	SURFACE	EMERGENCY LIGHT WITH EXIT SIGN
P	COMPASS OR EQUIVALENT	CCG	120	1	3.2W LED	WHITE	UNIVERSAL	LED EXIT SIGN WITH SELF-CONTAINED BATTERY PACK AND THERMOPLASTIC HOUSING AND SINGLE RED FACE
NOTE: CONNECT EXIT SIGN AND EMERGENCY BATTERY PACK (BATTERY-INVERTER) TO NON-SWITCHED LEG OF THE CIRCUIT								

- GENERAL NOTES:
- COORDINATE INSTALLATION OF ALL ELECTRICAL EQUIPMENT & DEVICES WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES
 - ALL OUTDOOR INSTALLED EQUIPMENT, CABINETS AND DEVICES SHALL BE WP AND HAVE AT LEAST NEMA 3R RATED ENCLOSURES
 - IF REQUIRED, MAKE ALL NECESSARY CHANGES AND COORDINATE THEM WITH ELECTRICAL ENGINEER
 - REMOVE OR RELOCATE ALL ELECTRICAL EQUIPMENT, DEVICES AND WIRING THAT NEED TO BE REMOVED OR RELOCATED TO ACCOMPLISH THE INSTALLATION OF NEW ELECTRICAL AND OTHER SYSTEMS. REMOVE EQUIPMENT, DEVICES & WIRING THAT ARE NOT USED
 - DO NOT REMOVE OR DISTURB ANY EXISTING DEVICES THAT NEED TO REMAIN
 - ALL REMOVED DEVICES SHALL BE SPARED FOR THE OWNER. VERIFY IT WITH THE OWNER
 - SEE ARCHITECTURAL PLAN FOR THE EXACT LOCATION OF LIGHT FIXTURES
 - DRAWINGS ARE BASED ON VISUAL FIELD OBSERVATION. REPORT ANY DISCREPANCIES DURING THE WALK-THROUGH AND BEFORE BID AND INSTALLATION

- FLAG NOTES:
- 1 CONNECT OUTDOOR FIXTURES THROUGH THE TIME SWITCH
- 2 INTERCONNECT HP1 & IU1 AND PROVIDE ALL REQUIRED CHANGES
- 3 SHALL BE CONNECT/CONTROLLED BY LIGHT CIRCUIT OF THIS ROOM



GSM Engineering
9990 Highland Glen Place,
Colorado Springs, CO 80920
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Design: GM
Drawn: GM
Check: GM
Revisions:

ELECTRICAL & COMMUNICATION SPECIFICATIONS

GENERAL—DIVISIONS 26, 27 & 28:

1. This specification includes electrical system 600V and less.
2. The Contractor shall furnish necessary labor, material, tools, equipment, associated controls and services, as required for the installation of a complete and operable electrical systems, as outlined and described in this specification and as shown on the applicable drawings.
3. The installation shall be in accordance with the requirements of the NFPA-70 & 72, IBC, ANSI, NEMA, ICEA, IEEE, ISA, UL, International Energy Conservation Code & all inspection authorities having jurisdiction.
4. Procure and deliver all licenses and certificates required to the Gen.Cont. or Architect. All inspection and utility line connection fees shall be paid by the el.contractor. Load data form shall be submitted by el.contractor.
5. Electrical Contractor shall visit the site and coordinate the new electrical drawings with other trades on this project, to determine any additional work that may be required. Include the additional work in the Bid.
6. Contractor shall be held responsible for verification of existing job condition prior to Bid. No additional costs shall be awarded to the Contractor or Subcontractors, after Bids have been submitted and contractors awarded.
7. Discrepancies between actual field conditions and contract documents shall be brought to the Engineer's attention for alternative method of installation three (3) days minimum prior to bidding this job to allow for issuance of clarifications.
8. Manufactures requirements: Companies specializing in manufacturing with minimum five years of documented experience.
9. Train Owner's maintenance personal to adjust, operate and maintain the installed equipment.
10. Beginning demolition means installer accepts the existing condition.

BASIC METHOD AND MATERIALS—DIVISION 26:

1. Materials and equipment furnished by the Contractor shall be new and delivered to the site in original cartons or packages.
2. All wiring shall be installed in a continuous raceway. Wiring shall be run concealed in finished rooms. In unfinished rooms wiring may be run exposed in raceway. Color-code all conductors and cables.
3. Wire and cable routing indicated is approximate unless dimensioned.
4. Verify field measurements as are indicated on the drawings.
5. Where wire and cable destination is indicated and routing is not shown, determine exact routing and length required.
6. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
7. Seal around cables penetrating fire-rated elements according to the existing Through-Penetration Firestop Systems requirements.
8. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values or as specified in UL486A & UL486B.
9. Make splices and taps that are compatible with conductor material, and possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
10. Tape uninsulated rating of conductor and connectors with electrical tape to 150 percent of insulation rating of conductor.
11. Perform each electrical test and visual & mechanical inspection stated in NETA ATS, Section 7.3.1. Certify compliance with test parameters.
12. All electrical equipment shall be labeled with the engraved nameplates.
13. All wiring can be installed in EMT, or flex conduit. Wiring shall be run concealed in finished rooms. In unfinished rooms wiring may be run exposed in EMT, or flex conduit. If wiring can be subject to damage use rigid conduits.
14. Provide access to existing wiring connections remaining active. Install access panel or modify installation.
15. Do not install outdoor electrical equipment under the water flow gutter.

RACEWAYS AND FITTINGS—DIVISION 26:

1. Rigid conduit shall be standard size, hot dipped galvanized conduit. Conduits not subject to damage can be EMT or flex conduits. All conduit shall be UL approved.
2. Thin wall conduit shall be standard size, galvanized with compression type connectors and fittings.
3. All electrical outlets shall be the Spec. grade. Recessed boxes shall be set flush with the finished surface using appropriate plaster rings. Cast metal boxes with neoprene gaskets shall be used in wet area and outside locations. Cover plates shall be smooth, ivory colored plastic selected with proper openings for the desired devices.
4. Provide the trace wire in each empty conduit. All empty or filled conduits shall be sealed for protection from the moisture

CONDUCTORS—DIVISION 26:

1. All conductors or cables shall be copper with RHW, THHW, THW, THWN and XHHW insulation unless otherwise noted or required by the NEC.
2. Aluminum conductors may be substituted for copper conductors. Increase the conduit and conductor sizes for the equivalent ampacity. Terminations (Cu-Al) shall be made in accordance with practices recommended by the Aluminum Association.
3. Use solid conductor for No. 10 AWG and smaller, stranded conductor for No. 8 AWG and larger, including control circuits.
4. Unless otherwise indicated, all wiring for power & lighting branch circuits shall be 12 AWG and minimum 16 AWG for control circuits.
5. Voltage drop (V.D.) cannot exceed 3% (3.6V for 120V) at the farthest outlet of power and/or lighting loads of branch circuits. The max. V.D. on both feeders and branch circuits cannot exceed 5% of nominal voltage of the line.
6. Use 10 AWG conductor for 120V, 20A breaker, max.16A load branch circuit longer than 58' but not exceeds 91' (one way).

WIRING DEVICES—DIVISION 26:

1. Switches and receptacles shall be of the Specification grade. Color shall be ivory unless indicated otherwise.
2. Receptacles shall be mounted vertically: 18"AFF & 6" above counter top unless otherwise noted.

PANELBOARDS—DIVISION 26:

1. All equipment shall be of one manufacturer and shall be in accordance with: ANSI, NEMA, UL, IEEE and NFPA 70 requirements and standards. Each panelboard assembly shall be provided with copper buses.
2. All panelboards shall be provided with disconnects or as shown on the drawings or as required by the NEC. Load centers are acceptable.
3. Use molded case current-limiting circuit breakers
4. Install panelboard and accessories according to NEMA PB 1.1 and NEC. Provide (5) spare 1 inch conduits from each recessed panelboard into the above suspended ceiling.
5. Perform: a-load balancing & make circuit changes. b-Infrared scanning.
6. Create a computer or typewriter directory to indicate circuit loads.

TRANSFORMER—DIVISION 26:

1. Provide low-sound-level Transformer, according to NEMA ST 20 standard sound level when factory tested according to IEEE C57.12.91.
2. Transformers 15KVA and larger shall be energy efficient and comply with NFPA 70 requirements.
3. Concrete pad shall be provided for all floor/ground mounted transformers

GROUNDING—DIVISION 26:

1. Grounding conductors: copper. Grounding electrode conductors: stranded cables. Underground conductors: bare, tinned & stranded.
2. Connectors: bolted-pressure, compression or exothermic-welded type. Comply with IEEE 837 and UL 467.
3. Grounding electrodes (rods): sectional type; copper-clad, zinc-coated or stainless steel. Size: 5/8" in diameter and min. 8'.
4. Installation: install at least (1) rod min. 2" below finished grade. Provide bonding straps and jumpers where are required.
5. Perform control & test in accordance with IEEE 81. Equipment rated: 500KVA & less shall be 10 ohms; 500 to 1000KVA shall be 5 ohms.
6. All installation shall be in accordance with NFPA, NECA, NEMA & ANSI

LIGHTING FIXTURES—DIVISION 26:

1. Lighting fixtures shall be as per the Lighting Fixture Schedule.
2. Furnish and install new lamps in all new fixtures. Use Cool White fluorescent lamps
3. Warranty: Minimum five years for emergency unit batteries and ballasts; one year for T8 and other fluorescent lamps.
4. Quality Assurance: Electrical devices and accessories as defined in NFPA 70-100; fixtures for hazardous locations shall comply with FMG; exit signs visibility and luminance to comply with NFPA 101.
5. Requirements: recessed fixtures comply with NEMA LE4; incandescent, fluorescent & to comply with UL.
6. Ballast for fluorescent fixtures to comply with NEMA C82.11 and shall be: Instant or rapid start; Sound rating A; Total harmonic distortion less than 10%; Transient voltage protection category A; Crest factor less than 1.7; Multiple lamp ballasts and maintain full light output on surviving lamps if one or more lamps fail; High power factor, at least 90%; Designed for surge of high voltage and complying with ANSI/IEEE C62.41 Cat.A; And listed for low electromagnetic-interference environments.
7. High Intensity discharge ballasts shall to comply with NEMA C82.4 and UL 1029, designed for Minimum Starting Temperature: -22deg F and be listed as Low-Noise ballast.
8. Exit Signs and Emergency Lighting Units to comply with UL 924.
9. Install suspended luminaries using pendants supported from swivel hangers.
10. Clean all fixtures and lamps upon the conclusion of the work. Fixtures that are cracked, broken, rusted or otherwise damaged shall be replaced by the Contractor. All lighting fixtures shall be installed free of gaps, uneven row extensions, or light leaks around recessed fixture trim.

AUXILIARY SYSTEMS—DIVISION 27:

1. Auxiliary syst. are: Telephone & CATV as indicated on drawings.
2. Connect Telephone & CATV outlets of each unit to the building distribution cabinets.
3. Installed system shall be complete, functional and checked/accepted by authorities having jurisdiction.

FIRE ALARM SYSTEM—DIVISION 28:

1. Installed system shall be complete, functional and checked/accepted by authorities having jurisdiction. Make all required changes.

ELECTRICAL SYMBOLS AND ABBREVIATIONS

LIGHTING DEVICES:

- Suspended fixture
- Recessed fixture
- Emergency 1-head lighting unit
- Surface or Recessed fixture
- Wall mounted fixture
- Wall-washer fixture
- Bollard
- Time Switch/Contactor (TS)
- Switch with motion detector
- Single pole switch
- Three way switch
- Four way switch
- Key-operated switch
- Dimmer switch

COMMUNICATION SYSTEM DEVICES:

- Telephone/CATV board or panel
- Television outlet (CATV)
- Wall mounted telephone outlet
- Wall mounted data outlet
- Wall mounted telephone/data outlet
- Chine
- Push button
- Sound System

ONE-LINE & WIRING DIAGRAMS DEVICES:

- Transformer (XFMR)
- Circuit breaker
- Meter
- Switch
- Disconnect Switch with fuses
- Disconnect Switch without fuses
- Photocell (P). Mount it on building and face it North
- Delta connection
- Symbol for any type of light fixture
- Grounded Wye connection
- Grounding: water pipe, electro(s) & building frame
- Connections

ABBREVIATIONS:

- | | | | |
|------|--|-----|----------------------------|
| AC | Mounted Above Counter, sink or back splash (verify location) | GRD | Ground contacts & Grounded |
| AC | High Mounted above counter or sink back splash (verify location) | GWH | Gas Water Heater |
| AFF | Above Finished Floor/Grade (from bottom) | IG | Isolated Ground circuit |
| AF | Amperage of breaker Frame | LUC | Local Utility Company |
| AT | Amperage of breaker Trip | MB | Meter Bank |
| BR | Breaker | N | Neutral |
| C | Conduit | P | Pole (for breakers) |
| CATV | Cable Television | PF | Power Factor |
| CFL | Compact Fluorescent Lamp | PH | Phase |
| CEL | Ceiling mntd equipment or device | SW | Switch |
| CP | Cable Pedestal | T | Transformer - XFMR |
| CT | Circuit | TP | Telephone Pedestal |
| EB | Electrical Board heater | TY | Type |
| EW | Electrical Wall Heater | UH | Unit Heater |
| GFI | Ground Fault Circuit Interrupter | VD | Voltage Drop (in %) |
| | | VL | Verify the exact location |
| | | WH | Water Heater |
| | | WP | Weatherproof (NEMA 3R) |

POWER DEVICES:

- Meter Bank (MB)
- Meter
- Electrical panelboard or load center
- Transformer (XFMR)
- Disconnect switch
- Fused disconnect switch
- Motor or Unit with the multiple motors
- Junction box on/in ceiling
- Junction box on/in wall
- Push button
- Duplex grounded receptacle,125V
- Duplex grounded receptacle 125V with ARC-Fault circuit Interrupter
- Duplex grounded receptacle 125V with Ground-Fault circuit Interrupter
- Isolated ground receptacle,125V
- Special purpose 240V receptacle
- Switch with thermal overload element

OTHER SYMBOLS:

- 1-Detail number, 2-Sheet number where detail is shown or where it is referred to.
- Orientation
- Flag notes
- Revision reference (if used)
- Feeder references

- Branch circuit/feeder homerun. Number of arrows indicate number of circuits. Designation indicates panel & breaker. #12AWG min, unless otherwise noted.
- For continuation see another plan, level or drawing, unless otherwise noted.
- UG—Underground conduit or cable

FIRE ALARM DEVICES:

- Fire Alarm Control Panel
- Fire alarm horn & light +7'-6" A.F.F. unless noted
- Smoke Detector
- Carbon Monoxide detector
- Flow Switch
- Tamper Switch
- Pressure Switch



GSM Engineering
9990 Highland Glen Place,
Colorado Springs, CO 80920
Cell: (719) 238-0946
E-mail: gsm.engr@gmail.com

AFFINITY ENGINEERING, LLC
7887 EAST BELLEVUE AVENUE
ENGLEWOOD, CO 80111
PHONE: 719-306-3411

JOHN HOTCHKISS
COMMERCIAL OFFICE
2290 OLD RANCH ROAD
COLORADO SPRINGS, CO

Project: 1905-05
Date: 9-10-2019
Design: GM
Drawn: GM
Check: GM
Revisions:

The site plan illustrates the proposed development at 10000 104th Avenue. It shows the layout of the building, parking areas, and surrounding property lines. Key features include:

- Commercial Office:** A large building footprint on the right side of the plan.
- Studio Office:** A smaller building footprint located near the center of the plan.
- Sign:** A designated area for a sign, located near the bottom left of the building footprint.
- Property Line:** Indicated by a dashed line running diagonally across the plan.
- North Arrow:** Located at the bottom center of the plan.
- Scale:** 1"=30'.

PHOTOMETRIC SITE PLAN
SCALE: 1"=30'

[illegible]