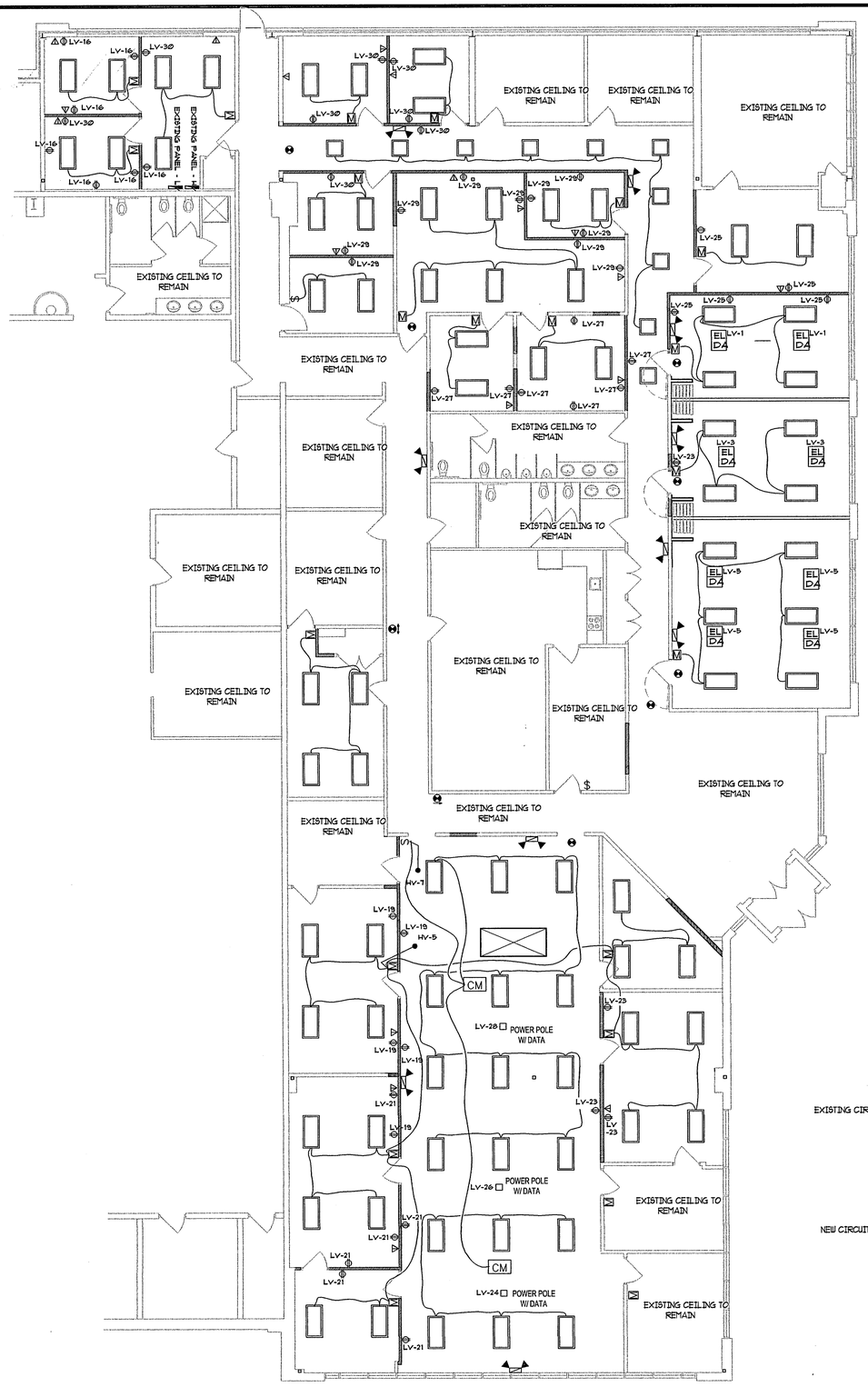

1 / E1 POWER AND LIGHTING PLAN

SCALE: 1/8" = 1'

SYMBOL LIST

- HOMERUN TO PANELBOARD
- BH — RELOCATED BASEBOARD HEATER
- S — SINGLE POLE SWITCH
- S_3 — THREE WAY SWITCH
- S_P — SPECIAL SWITCH
- DUPLEX RECEPTACLE
- MX6 — DOUBLE DUPLEX SHOP RECEPTACLE GFI PROTECTED
- MULTI OUTLET ASSEMBLY (WIREMOLD)
- SPECIAL PURPOSE RECEPTACLE
- GROUND FAULT RECEPTACLE
- ISOLATED GROUND RECEPTACLE
- TWO POLE RECEPTACLE
- FLOOR BOX
- POWER POLE
- COMPUTER OUTLET
- F — EXHAUST FAN
- AC — ROOF TOP AC UNIT
- AH — AIR HANDLER
- IH — INFRA-RED HEATER
- FD — FUSED DISCONNECT SWITCH
- ND — NON FUSED DISCONNECT SWITCH
- PANEL BOARD
- GROUNDING AS PER NATIONAL ELECTRICAL CODE
- EL D4 — FLOOR RECEPTACLE W/DATA COMPARTMENT
- M — WALL MOUNTED MOTION SENSOR
- CM — CEILING MOUNTED MOTION SENSOR

ELECTRICAL NOTES

1) PERFORM ALL WORK IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), OSHA REQUIREMENTS, ALL FEDERAL, STATE, AND LOCAL CODES AND ALL OWNER REQUIREMENTS.

2) INCLUDE ALL TEMPORARY POWER AND LIGHTING, PERMIT, LICENSE, AND INSPECTION COSTS IN BID.

3) VERIFY EXACT LOCATIONS AND MOUNTING OF ALL FURNITURE CONNECTIONS WITH FURNITURE PROVIDER AND IN THE FIELD PRIOR TO ROUGH IN.

4) THE TERM "PROVIDE" MEANS, "FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR", AND THE TERMS "CONTRACTOR" AND "E.C." MEAN "ELECTRICAL CONTRACTOR", UNLESS INDICATED OTHERWISE. ALL WORK INDICATED ON THE ELECTRICAL DRAWINGS AND ELECTRICAL SPECIFICATIONS IS BY THE E.C., UNLESS INDICATED OTHERWISE. WHERE THE PROJECT IS PERFORMED BY MULTIPLE PRIME CONTRACTORS UNDER "MULTIPLE PRIME BIDS" THIS DESIGNATES THE WORK BY THE ELECTRICAL PRIME CONTRACTOR. WHERE THE PROJECT IS PERFORMED BY A SINGLE OVERALL CONTRACTOR UNDER "LUMP SUM BIDS" THIS APPROXIMATELY DESIGNATES THE WORK BY THE ELECTRICAL TRADE SUBCONTRACTOR (EXACT DIVISION OF TRADE SUBCONTRACTOR WORK IS THE SOLE RESPONSIBILITY OF THE SINGLE OVERALL CONTRACTOR; TRADE SUBCONTRACTOR WORK DIVISION SHOWN ON THE DRAWINGS/SPECIFICATIONS IS FOR REFERENCE AND CONVENIENCE ONLY).

5) PERFORM ALL WORK IN PHASES AND SEQUENCES AS DIRECTED BY THE OWNER.

6) FOR ALL NEW CIRCUIT BREAKERS IN EXISTING BRANCH AND DISTRIBUTION PANELS, PROVIDE CIRCUIT BREAKERS MATCHING AND COMPATIBLE WITH EXISTING CIRCUIT BREAKERS. PROVIDE WITH SHORT CIRCUIT INTERRUPTING RATINGS EQUAL TO OR EXCEEDING THE HIGHEST RATED EXISTING BRANCH CIRCUIT BREAKER IN THE PANEL. CIRCUIT BREAKER TYPES INDICATED ON THE DRAWINGS (WHERE APPLICABLE) ARE GUIDES TO PRICING ONLY. VERIFY EXACT TYPE AND ALL REQUIREMENTS IN FIELD PRIOR TO RELEASING EQUIPMENT.

7) PROVIDE COMPLETE GROUNDING IN ACCORDANCE WITH THE N.E.C.. PROVIDE GROUNDING CONDUCTORS WITH AND/OR PART OF ALL WIRING.

8) UTILIZE WIRING METHODS COMPLYING WITH (OR EXCEEDING, WHERE SPECIFIED) MINIMUM REQUIREMENTS OF THE N.E.C..

9) SUITABLY LABEL ALL NEW ELECTRICAL EQUIPMENT IN ACCORDANCE WITH THE N.E.C. AND IN A METHOD APPROVED BY THE OWNER. DESCRIBE THE EQUIPMENT, LOAD/DEVICE SERVED, VOLTAGE, PHASE, RATED AMPS, AND PANEL AND CIRCUIT NUMBER FEEDING THE EQUIPMENT, ETC. (WHERE APPLICABLE).

10) PROVIDE ALL NEW AND EXISTING BRANCH PANELS (WHERE CONNECTED TO OR MODIFIED AS PART OF THIS PROJECT) WITH ACCURATE AND DESCRIPTIVE TYPEWRITTEN CIRCUIT DIRECTORIES. FOR EXISTING PANELS, PROVIDE DIRECTORIES INCLUDING ALL MODIFICATIONS AS PART OF THIS PROJECT AS WELL AS PREVIOUS "PENCILED IN" CHANGES AND INFORMATION. ACTUAL TRACING AND IDENTIFYING EXISTING CIRCUITS IS NOT REQUIRED.

11) COMPLETELY SEAL AND FIRE STOP ALL PENETRATIONS OF ALL FIRE AND/OR SMOKE RATED WALLS, FLOORS, CEILINGS, AND ANY OTHER CONSTRUCTION (INCLUDING ALL WALLS REQUIRED TO BE RATED BY CODE) TO A RATING MATCHING OR EXCEEDING THE FIRE RATING. COMPLETELY SEAL AND WEATHERPROOF ALL PENETRATIONS OF EXTERIOR, AT OR BELOW GRADE, AND WET LOCATION WALLS AND FLOORS AND ROOF PENETRATIONS.

12) ALL EXITS AND EMERGENCY LIGHTS TO BE CONNECTED TO THE NEAREST LIGHTING CIRCUIT IN FRONT OF ALL SWITCHES.

PANEL SCHEDULES

PANEL LV

Panel Type: BOLT-IN — Location: Work Room
Mains: MB — Phase: 3 Wire 4
MCB: yes Pole 3 Amps 100 — Conduit size: 1-1/2" EMT
A.I.C Rating: 10,000 — Feeder size: 4-#3 & 1-6gr
Volt Rating: 120/208/3 — Total Connected load: 25240 Watts

	DIRECTORY	Conduit / Wire	BRK		A	B	C		BRK	Conduit / Wire	DIRECTORY	
EXISTING CIRCUITS	Floor Receptacles	12/2 MC	20A	1	540 1080			2	20A	12/2MC	Engineering Recept.	EXISTING CIRCUITS
	Floor Receptacles	12/2 MC	20A	3		180 1080		4	20A	12/2MC	Engineering Recept.	
	Floor Receptacles	12/2 MC	20A	5			540 1080	6	20A	12/2MC	Purchasing Recept.	
	Storage Room Receptacles	12/2 MC	20A	7	360 1080			8	20A	12/2MC	Planning Recept.	
	Kitchen Receptacle	12/2 MC	20A	9		1000 1440		10	20A	12/2MC	Kitchen Recept.	
	Kitchen Receptacle	12/2 MC	20A	11			1000 900	12	20A	12/2MC	Storage Recept.	
	Kitchen Receptacles	12/2 MC	20A	13	1000 900			14	20A	12/2MC	Office Recept.	
	Prod. Receptacles	12/2 MC	20A	15		360 900		16	20A	12/2MC	Office Recept.	
	Planning Receptacles	12/2 MC	20A	17			540 540	18	20A	12/2MC	Office Recept.	
	Sales Lab Receptacles West	12/2 MC	20A	19	900 1080			20	20A	12/2MC	Office Recept.	
	Sales Lab Receptacles West	12/2 MC	20A	21		1080 1260		22	20A	12/2MC	CEO Recept.	
NEW CIRCUITS	Mangers Receptacles	12/2 MC	20A	23			720 540	24	20A	12/2MC	Power Pole	NEW CIRCUITS
	Conf. Rm Receptacles	12/2 MC	20A	25	900 500			26	20A	12/2MC	Power Pole	
	IT Mangers Receptacles	12/2 MC	20A	27		900 500		28	20A	12/2MC	Power Pole	
	Office Receptacles	12/2 MC	20A	29			1440 900	30	20A	12/2MC	Office 101 receptacles	
	Total Connected KW 25.24				8340	8700	8200	70.11 Total Connected Amps				

FIXTURE SECLUDES

	A	Recessed 2x4 Fluorescent with Prismatic lens	277V	3 32W	Simkar	TY-142-232-B5
	B	Recessed 2x2 Fluorescent with Prismatic lens	277V	2 32W	Simkar	IE48-E1
	C					
	D					
	E	LED Exit Sign, with battery back up	277V	LED	Light Alarms	LDURA-K12
	F	Emergency Battery Pack 5-4 watt, twin head	277V	2 18W	Light Alarms	2P12G1/L18
	G	Dual Remote Head 25watt, 12v	12V	2 32W	Light Alarms	ELF-645

THIS IS RELEASED FOR CONSTRUCTION 11/9/11 ELECTRICAL SUBCONTRACTOR

MULHERN Consulting Engineers and ASSOCIATES, Incorporated
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Hatboro, Pennsylvania 19040
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Fax: (215) 293-9214
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Revisions

Date	Description
12/21/2010	Added automatic lighting shutoff

DSG Electrical Contractors, Inc.
NJ License # 15071
435 Tyburn Road
Fairless Hills, PA 19030
Phone: 215-736-2010
Fax: 215-736-2108

KNF NEUBERGER, INC.
2 BLACK FOREST ROAD
TRENTON, NJ 08691

Drawing Date: 11/15/2010

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