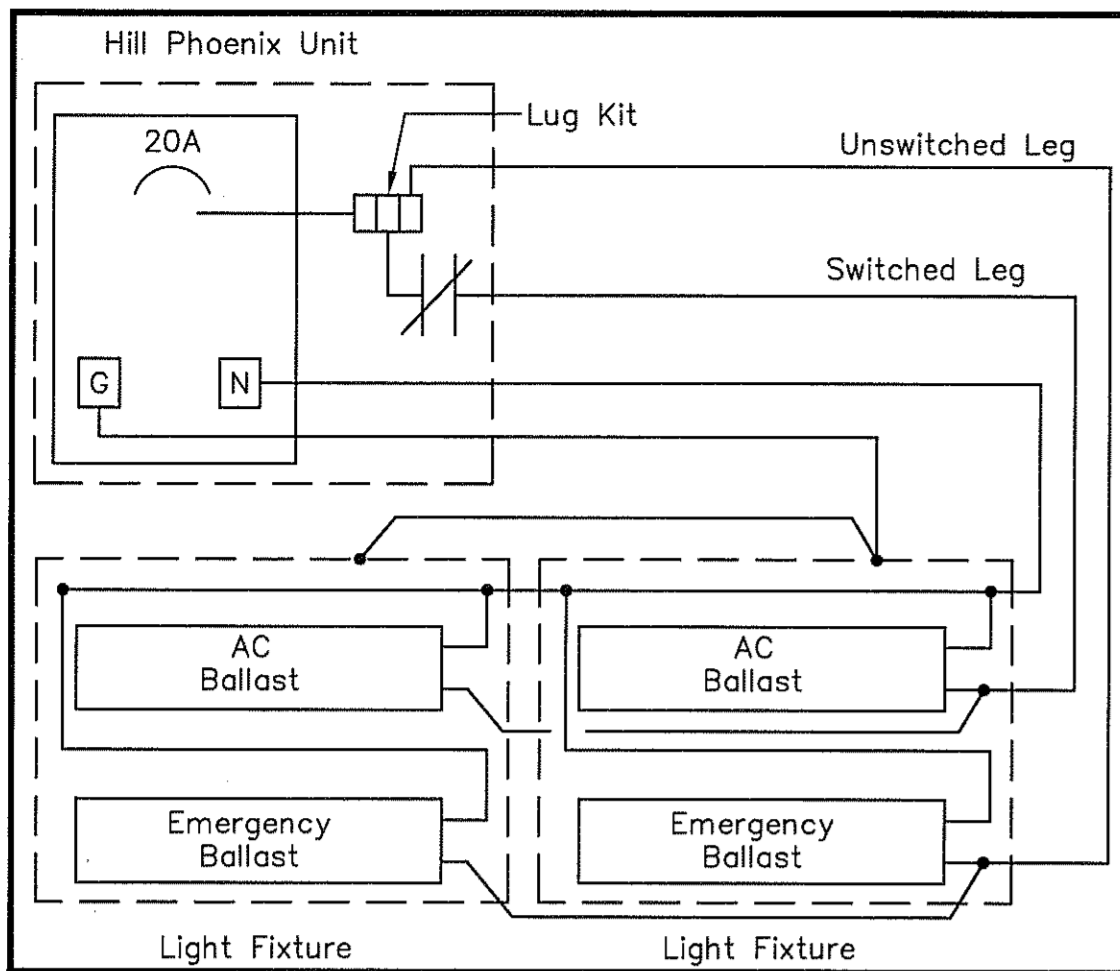
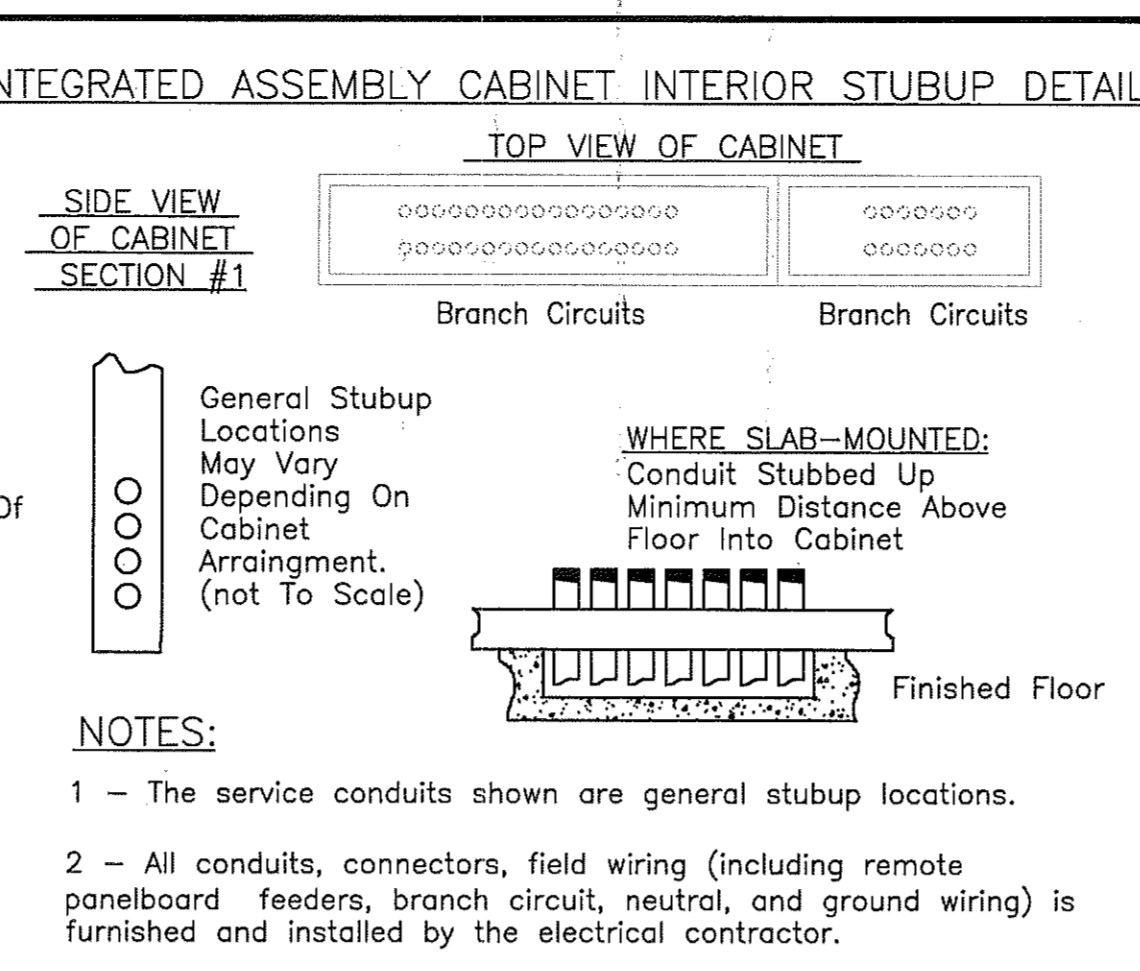
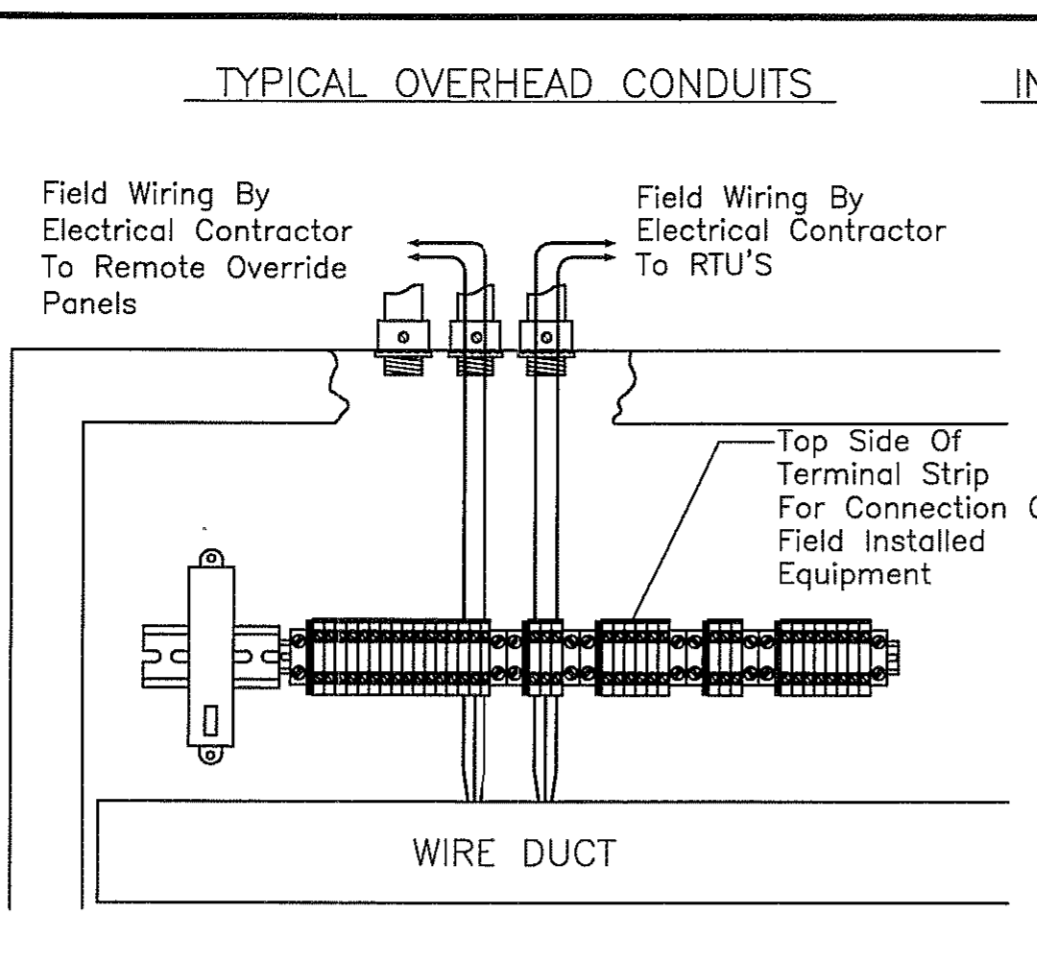


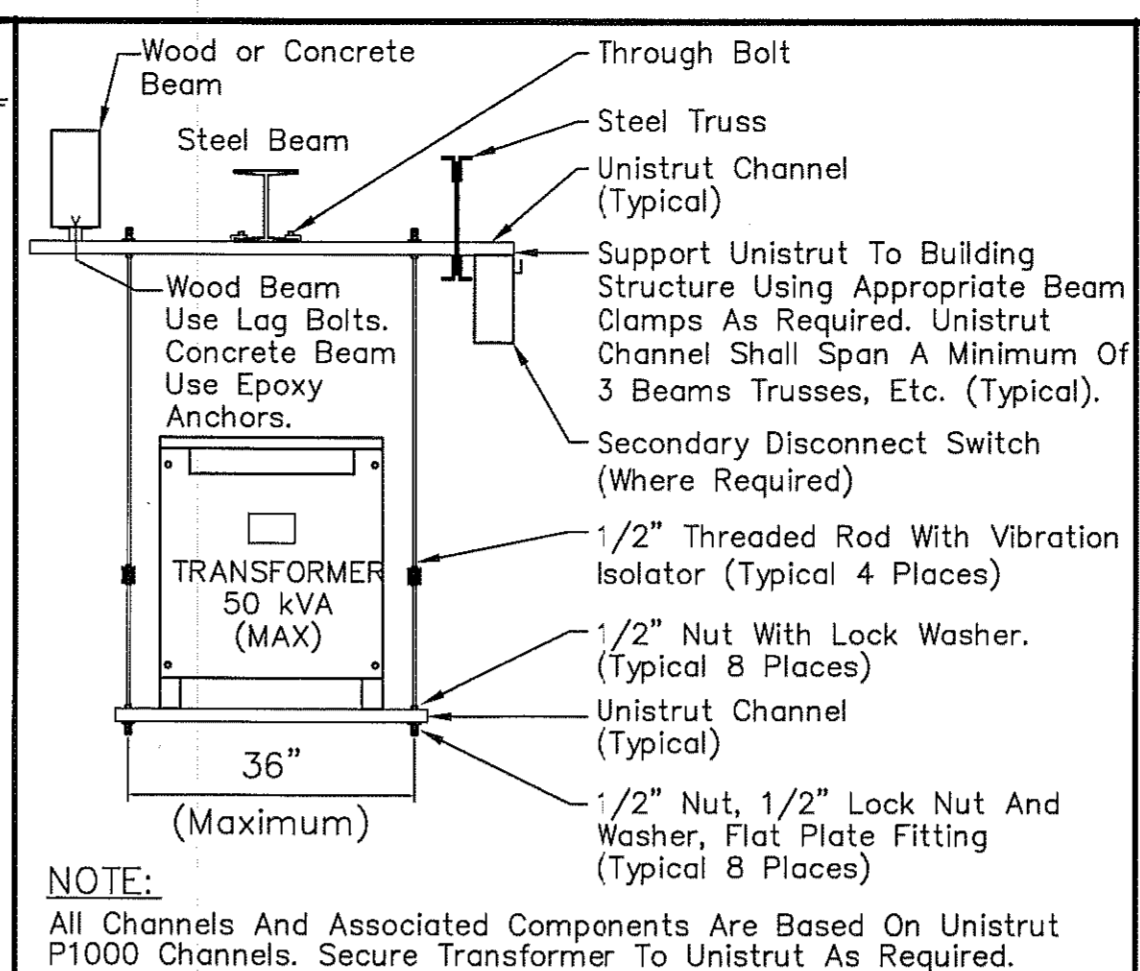
CONTRACTORS SHALL VERIFY EXISTING CONDITIONS AND CORRELATE DIMENSIONS PRIOR TO PROVIDING THE WORK DETAILED IN THESE DRAWINGS. AND SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. COPYRIGHT SBM, ARCHITECTS P.C. UNAUTHORIZED REPRODUCTION OR OTHER USE OF THIS DRAWING IS PROHIBITED.



EMERGENCY BALLAST WIRING 20
REF.: 08/E2.1 NO SCALE



CONDUIT ENTRY DETAIL 18
REF.: None



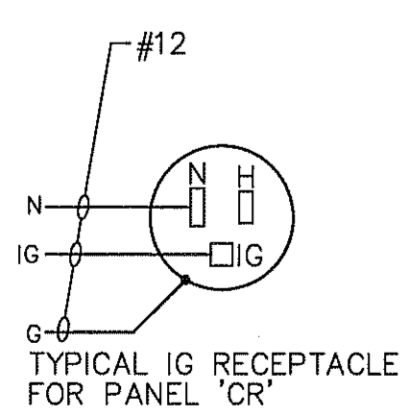
TRANSFORMER MOUNTING DETAIL 17
REF.: None

NOTES FOR THIS DRAWING

- Refer to sheet EMS1.1 for an overview of the Integrated Power & Control Assembly and the Energy Management System (EMS).
- Installation kit with sensors and equipment is shipped by the EMS vendor, or as part of the Hill Phoenix equipment. Wire is supplied by the Electrical Contractor in accordance with the EMS specifications on the EMS sheets.
- Wiring of HVAC unit power, control and sensor wiring is by the EC. Temperature sensor wiring must NOT be run in the same conduit as line voltage circuits.
- EMS override switches are part of a single assembly manufactured by Novar and supplied by the EMS vendor to the Power wall manufacturer. Hill Phoenix to mount override on door of center section of main switchgear. Factory wire as indicated on the EMS vendor drawings.
- The remote panels 'AQ', 'G' and 'CR' are part of the Integrated Power & Control Assembly package. All remote panels are flush mount. The transformers (if shown) are also part of the package. The Main Distribution Panel (MDP) may or may not be part of the package - refer to the Single Line Diagram for details.
- Refer to Sheets A0.2, E2.5 and EMS1.1 and Project Manual for responsibilities regarding control system components, wire and wiring.
- EC shall locate the outdoor light sensor and temperature sensor in accordance with the detail on the drawings.
- All wiring must be run in designated panduits. The bottom of the cabinet is intentionally left open for lateral runs of large conductors through the cabinet to the subpanels, if required.
- The Cage Room contactor/timer assembly is part of the Integrated Power & Control Assembly package and must be field installed by the EC. See Sheet E3.2 for location.
- Unless otherwise noted, wiring shown solid is field installed, and wiring shown dashed is factory installed by PETCO's vendor.
- A variety of grounding methods is indicated. Method(s) shall be in accordance with local requirements. EC shall perform a fall of potential test to ensure maximum earth ground resistance of 25 ohms as required by NEC Art. 250-56. If the test reveals more than 25 ohms, contact the Engineer of record. If less than 25 ohms are discovered, EC is required to install at minimum the cold water service ground, building steel ground, gas and fire suppression system piping ground, UFER (new construction only), and ground rods. All interior metal piping shall be bonded to the service equipment enclosure per NEC Art. 250-80.
- Provide grounding electrode conductors and bonding jumpers for all dry type transformers (where shown on plans). All connections to building steel shall be exothermic welds.
- Where a remote main disconnecting means is required (such as for outside disconnect for fire protection in a multi-tenant use), provide the following:
 - Circuit Breaker in MDP:
 - o For 277/480V Service: General Electric #SAST1 - 120V Coil (for SGLA Main Breakers) add on shunt trip mechanism for 300A or 400A MCB in MDP
 - o For 120/208V Service: General Electric #SAST1 - 120V Coil (for SKHA Frame Main Breakers) add on shunt trip mechanism for 600A or 800A MCB in MDP
 - 120V-1Ph power from spare circuit B#1
 - Break glass station for shunt trip, model and location per the direction of the local Authority Having Jurisdiction.
- Electrical Contractor shall provide wiring from the security system to the EMS. See EMS1.1 for more information.
- EMS system requires Cat5 network connection from DSL modem location near telephone backboard to Savvy mounting location as shown in EMS1.1. Test Cat5 cable continuity.

CONTACTOR SCHEDULE															
Contactor	EMS	Function	Circuit Controlled (via Contactor pole indicated)												Load Description
A	B	C	1	2	3	4	5	6	7	8	9	10	11	12	D
1	1	Employee Lights	L#4	L#6	L#10	L#12	L#14	L#16	L#18	-	-	-	-	-	Lighting in Work & Wellness Rooms, Pre-Sales, Toilet Rooms, Manager's Office, Break Room
2	1	Employee Lights	A#4	A#6	A#24	A#30	B#3	B#9	B#35	B#37	B#39	A#13	-	-	Exhaust Fans, Habitat Lighting, Quick Tag, EWC, DHW Pump, Bagging Station, Manager AHU/ACC
3	2	Stock Lights	L#5	L#9	L#13	L#17	L#21	L#25	L#29	L#33	L#37	L#24	L#20	-	Selected lighting in Retail area
4	3	Customer Lights	L#7	L#11	L#15	L#19	L#23	L#27	L#31	L#35	L#22	L#39	L#41	-	Remaining lighting in Retail area
5	3	Customer Lights	A#2	A#10	A#12	A#14	A#16	A#18	A#20	A#22	-	-	-	-	End cap displays, miscellaneous 120V loads
6	3	Customer Lights	A#39	A#40	A#41	A#42	-	-	-	-	-	-	-	-	End cap displays, track lighting
7	4	Grooming Lights	L#2	-	-	-	-	-	-	-	-	-	-	-	Grooming lighting
8	5	Aquarium Tank Lights	-	B#2B	B#30	-	-	-	-	-	-	-	-	-	Aquarium tank lights
9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	7	Exterior Signs	A#8	B#14	B#16	B#18	B#20	B#22	-	-	-	-	-	-	Exterior signs, display window receptacles, parking lot lights, front facade lighting
11	7	Parking Lot Lights	L#38	L#40	L#42	-	-	-	-	-	-	-	-	-	Parking lot lights, front facade lighting
12	8	Security Lights	L#8	L#2B	-	-	-	-	-	-	-	-	-	-	Perimeter wall packs

Isolated grounding (IG) is MISSION CRITICAL and must be in strict accordance with these drawings, the Integrated Power & Control Assembly manufacturer's Shop Drawings, and Petco MIS Department recommendations. Do not deviate without written authorization. All circuits served by Panel 'CR' are to be isolated ground. An isolated ground wire is to be run from the source (i.e. either the service entrance or separately derived system - whichever is electrically closer to Panel 'CR') to the isolated ground bar in Panel 'CR'. For further installation information see IEEE Standard 1100 ("Powering and Grounding Sensitive Electronic Equipment"), Chapter 9, Section 9.10.12. Any deviation from this will require immediate rectification by the Contractor and possible reimbursement for damages caused by failure to comply. Route isolated ground conductor (green with yellow stripe), independent and unconnected to other ground wires, in parallel with panel feeders all the way to the ground source (i.e. either the service entrance or separately derived system - whichever is electrically closer to Panel 'CR'). To test, lift the Isolated Ground wire from the lug at the ground source and test at Panel 'CR' that there is no continuity between IG and equipment ground busses. At completion of test, reattach IG to ground source lug and verify that now there is continuity between IG ground buss and equipment ground buss at Panel 'CR'.

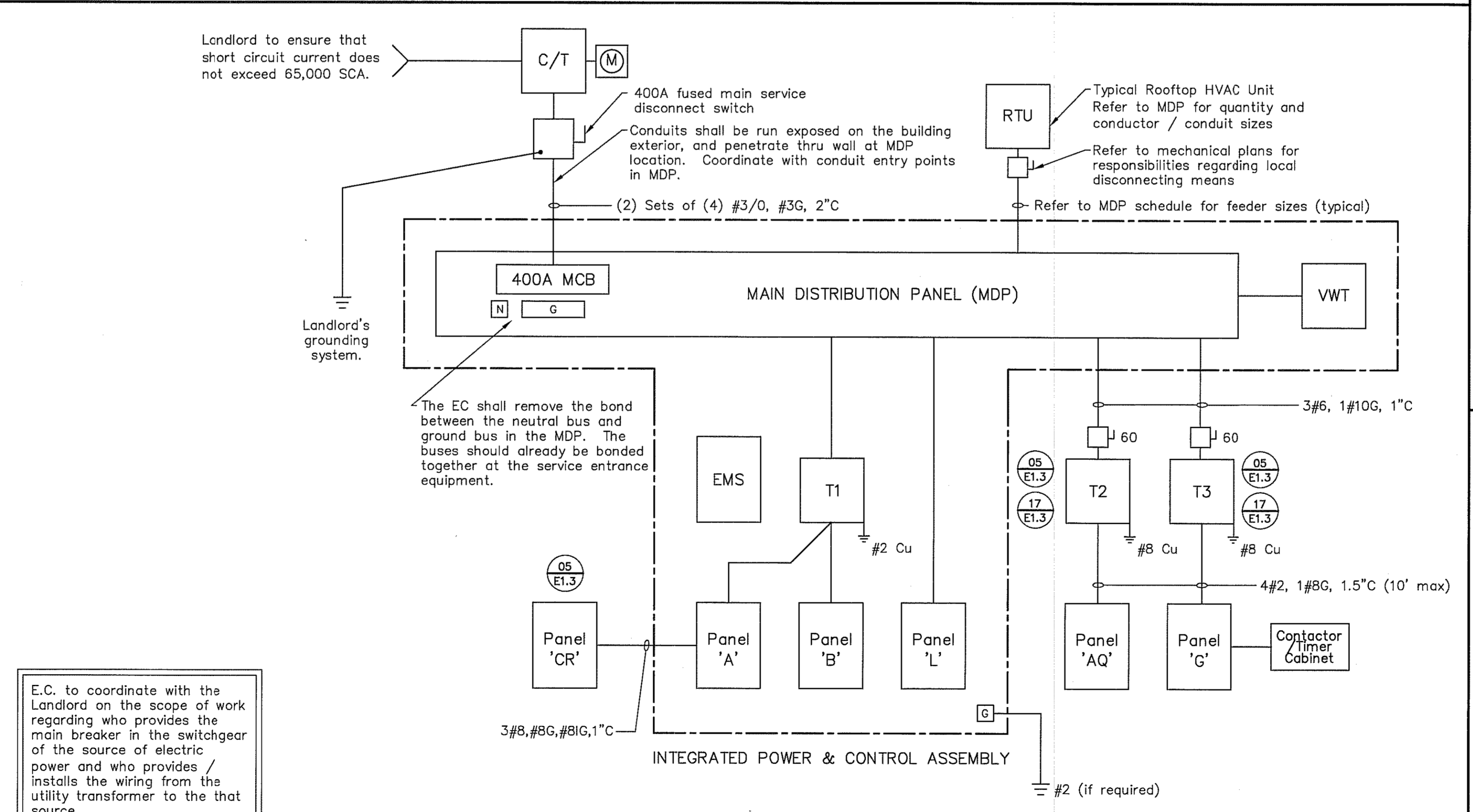


TRANSFORMER SCHEDULE

#	KVA	Primary	Secondary	Location	Sheet Ref.
T1	75	480V	208V	Pre-Sales	E2.2
T2	30	480V	208V	Aquarium	E3.2
T3	30	480V	208V	Grooming	E3.2

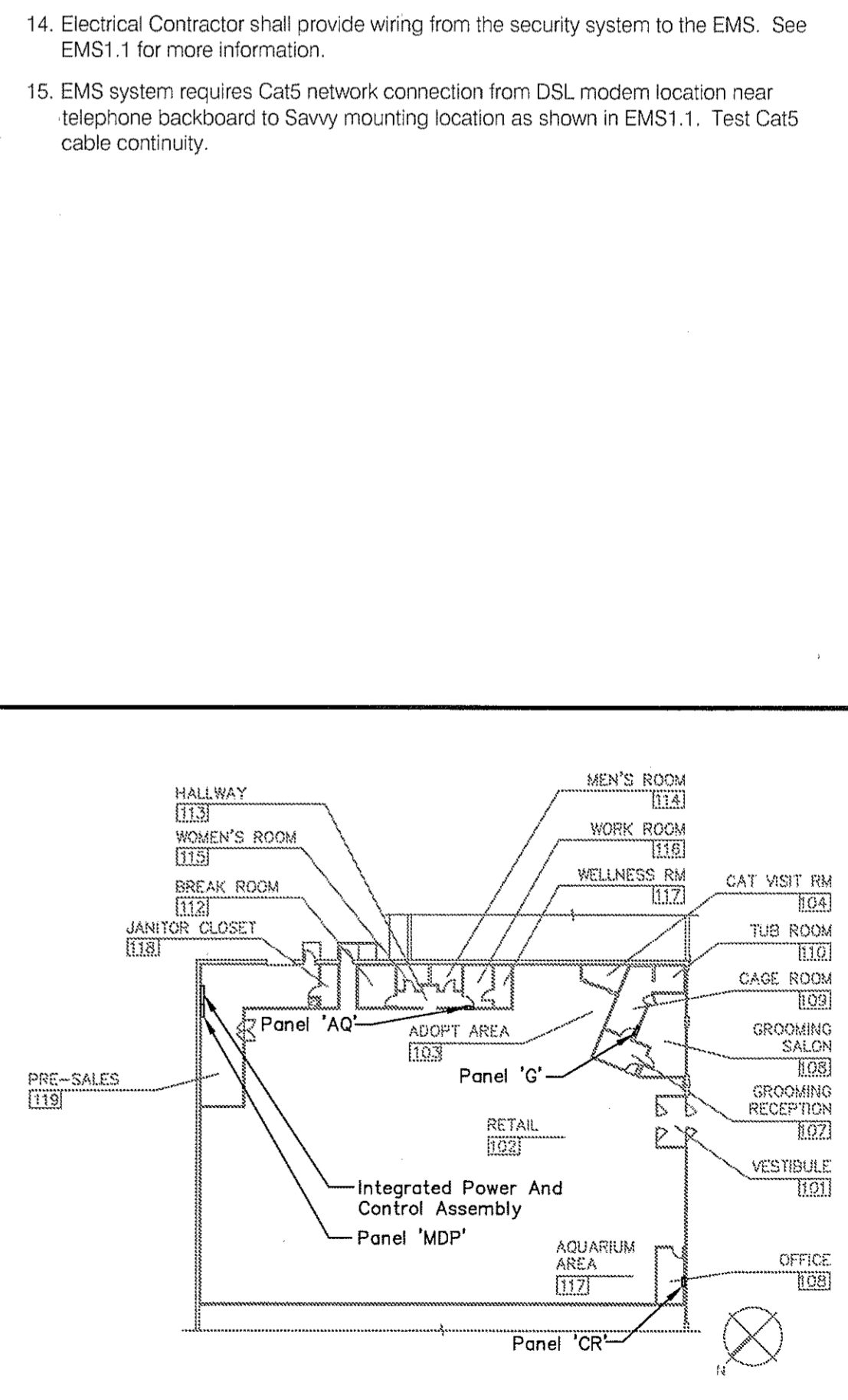
1. Secondary protected by MCB within 10' cable length
2. Use high efficiency (EE) transformers in CA, MA, MN, RI, VT, NY and the city of Seattle

SINGLE LINE DIAGRAM DETAILS 05
REF.: 02/E1.3 NO SCALE



E.C. to coordinate with the Landlord on the scope of work regarding who provides the main breaker in the switchgear of the source of electric power and who provides / installs the wiring from the utility transformer to the that source

SINGLE LINE DIAGRAM 02
REF.: None



KEY PLAN 01
REF.: None

MEP Engineers of Record
Randall A. Nelson, P.E.
14817 West 96th Street
Lenexa, Kansas 66215
Phone 913.322.9150

PETCO ANIMAL SUPPLIES STORES, INC.
PETCO 'CARY, NC'
213 CROSSROADS BOULEVARD
CARY, NC 27518

DISTRIBUTION:	DATE:
25% SUBMISSION	01-15-10
75% SUBMISSION	01-29-10
98% SUBMISSION	02-25-10
ISSUED FOR CONSTRUCTION	02-26-10

SBM JOB#	PETCO P.M. JOB#
08147	09277
DRAWN:	CHECKED:
MTH/JCC/UMM	BJT

DRAWING TITLE:
ELECTRICAL SINGLE LINE DIAGRAM AND DETAILS
E1.3