

1 FOURTH FLOOR – ELECTRICAL DISTRIBUTION  
SCALE 1:100

- DRAWING NOTES:**
- 1 PROVIDE DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 2 PROVIDE DEDICATED DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 3 PROVIDE GFCI DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 4 PROVIDE DEDICATED DUPLEX RECEPTACLE (5-20R) FOR NEW PRINTER C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 5 PROVIDE SIX (6) CONTROLS TRANSFORMER FOR ADDITIONAL VAV BOXES (LOW VOLTAGE WIRING BY OTHERS) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE. MOUNT TO UNDERSIDE OF SLAB. LOCATIONS NOT SHOWN.
  - 6 PROVIDE DISTRIBUTION PANEL, REFER TO SLD AND PANEL SCHEDULE FOR FURTHER DETAILS.
  - 7 PROVIDE CEILING MOUNTED, (SLAB MOUNTED BOX) C/W ALL CIRCUIT(S), CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 8 PROVIDE ELECTRICAL DISTRIBUTION AS PER SLD, C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 9 30KVA TRANSFORMER TO SUSPENDED FROM BUILDING STRUCTURE. STRUCTURAL AND SEISMIC SUPPORT SHALL BE DESIGNED BY STRUCTURAL ENGINEER AND SUPPLIED BY GENERAL CONTRACTOR. MOUNT TRANSFORMER AS HIGH AS POSSIBLE.
  - 10 PROVIDE AND INSTALL EMERGENCY CALL SYSTEM C/W AUDIBLE AND VISIBLE SIGNAL, PUSH BUTTONS, PULL STRING, ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE TO MAKE FULLY OPERATIONAL SYSTEM. REFER TO UNIVERSAL WASHROOM TYPICAL DETAIL. INSTALL AS PER OBC 3.8.3.12.(2). SIGNAGE BY OTHERS.
  - 11 PROVIDE WIRING ALL ASSOCIATED CONDUIT AND WIRING ASSOCIATED WITH FINAL CONNECTIONS REQUIRED TO SERVICE DUCTLESS SPLIT SYSTEM UNITS TYPICAL TO ALL FLOORS (ELECTRICAL/IT CLOSETS) MAIN FEEDER DIRECT TO EVAPORATOR COIL IN IT CLOSET, THEN FEEDER UP TO CONDENSER LOCATED ON THE ROOF. COORDINATE EXACT WIRING REQUIREMENTS WITH FINAL UNIT SELECTION.
  - 12 THE ELECTRICAL CONTRACTOR SHALL PROVIDE OPTIONS FOR AUTOMATIC CONTROL OF RECEPTACLE LOADS ON EACH FLOOR. THE CONTRACTOR MAY USE A RELAY/CONTACTOR WITH RECEPTACLE CIRCUITS RUN THROUGH IT C/W AUTOMATIC TIME CLOCK, OTHER OPTIONS MAY BE USED SUCH AS AUTOMATICALLY CONTROLLED RECEPTACLES.

**AUTOMATIC RECEPTACLE CONTROL SECTION 130.5(D):**

CONTROLLED RECEPTACLES THAT AUTOMATICALLY SHUT-OFF ARE REQUIRED IN PRIVATE OFFICES, OPEN OFFICES, LOBBIES, COPY ROOMS, KITCHENETTES, AND CONFERENCE ROOMS.

AT LEAST ONE CONTROLLED RECEPTACLE MUST BE WITHIN 6 FEET OF AN UNCONTROLLED RECEPTACLE; THIS CAN BE ACCOMPLISHED BY SWITCHING ONE OF THE TWO OUTLETS IN EACH RECEPTACLE

CONTROLLED RECEPTACLES NEED TO BE MARKED TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLE

ALLOW FOR ALL ASSOCIATED CONDUIT, WIRE HARDWARE, FASTENERS, FITTINGS, RELAYS, WIRELESS DEVICES REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. TYPICAL NOTE, 4 FLOORS.

**COMMUNICATION NOTES:**

1 ELECTRICAL DRAWINGS TO BE READ IN CONJUNCTION WITH SECURITY, IT AND AV DRAWINGS.

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    - .1 NOOGA COMMS/AV/SECURITY DRAWINGS.
    - .2 ADDENDUMS E1 THROUGH E4.
    - .3 ESA PLAN APPROVAL REVIEW COMMENTS.
- NOTE: SOME CHANGES FROM ADDENDUMS ARE NOT SHOWN ON THE DRAWINGS. HOWEVER THE CONTRACTOR SHOULD COORDINATE AND KEEP A PROPER WORKING COPY OF THE ADDENDUMS AND ONGOING AS-BUILT DRAWINGS ON SITE AT ALL TIMES.

No	DESCRIPTION	DATE
A	ISSUED FOR CONSTRUCTION	NOV. 22 2016

**REVISIONS**

client:  
**TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

project:  
**TOMLINSON**  
NEW BUILDING  
CITIGATE, OTTAWA

drawing title:  
**ELECTRICAL DISTRIBUTION  
FOURTH FLOOR**

scale:	<b>AS SHOWN</b>	drawn by:	<b>M.G</b>
designed by:	<b>M.G</b>	reviewed by:	<b>J.R.P.</b>
approved by:	<b>J.R.P.</b>	date:	<b>NOV. 2016</b>

project no.:	<b>100-16L</b>	drawing no.:	<b>E-204</b>
revision:	<b>0</b>		



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Item No	Qty	Equipment Description	Volts	Phase	Amps	KW	HP	Direct	Receipt	Elec Remarks	Elec Breaker	Elec Feeder	Elec Circuit
1	1	Balance - Ohaus: EP22001	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
	2	Balance - Ohaus: RD35LM	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
	1	Balance - Ohaus: EP4102	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
	1	Balance - Mettler: PJ6000	120	1	1.0				5-15P		15A-1P	2#12-12mmC	
2	3	Forced Air Over - Quincy Labs: 21-350	120	1	18.0				5-20P	Bench	20A-1P	2#12-12mmC	
3	1	Forced Air Over - Shel Lab: FX28-2	208	1	20.0				6-20P	Floor	20-2P	2#12-12mmC	
4	1	Forced Air Over - Barnstead/Thermolyne: LC-18	208	1	16.0				6-20P	Floor	20-2P	2#12-12mmC	
5	1	Lab Oven - Quincy Labs: 10GC	120	1	5.2				5-15P	Counter top	15-1P	2#12-12mmC	
6	1	Microwave Oven - Panasonic: NN-T795SFX	120	1		1.2			5-15P	Dedicated	15-1P	2#12-12mmC	
	1	Microwave Oven - Panasonic: JES16505HC01	120	1		1.55			5-15P	Dedicated	15-1P	2#12-12mmC	
7	2	Sieve Shaker - Ro-Tap: RX-29	120	1	4.4				5-15P		15-1P	2#12-12mmC	
	1	Sieve Shaker - Ro-Tap: RX-30	120	1	4.4				5-15P		15-1P	2#12-12mmC	
8	2	Sieve Shaker - Gilson: TS-1	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
9	1	Sieve Shaker - Gilson: SP4	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
10	1	Gyratory Compactor - Troxler: 4141	120	1	10				5-15P	Dedicated	15-1P	2#12-12mmC	
	1	Gyratory Compactor - Pine: AFG2A	120	1	12				5-15P	Dedicated	15-1P	2#12-12mmC	
11	1	Mechanical Mixer - Spar: SP-200	120	1	13				5-15P	Dedicated	15-1P	2#12-12mmC	
12	1	Hot Plate - Barnstead/Cimarec: HP141925	120	1	5.5				5-15P		15-1P	2#12-12mmC	
13	1	Marshall Compression Machine - Humbolt: H-1322	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
14	1	Water Bath - Humbolt: H-1390	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
	1	Water Bath - Humbolt: H-1394	120	1	15				5-15P	Dedicated	15-1P	2#12-12mmC	
15	1	Centrifuge Extractor - Ploog: M207	120	2	5				5-15P		15-1P	2#12-12mmC	
16	1	High Speed Centrifuge - SMM	120	1	6				5-15P		15-1P	2#12-12mmC	
17	1	Solvent Recycler - Spee-distill	120	1					5-15P		15-1P	2#12-12mmC	
18	1	Ignition Oven - Troxler: 4155	208	1	50				6-50P		50-2P		
19	1	UN-USED											
20	1	Water Bath Heater - EBO-JAGER: TS-250	120	1		300			5-15P		15-1P	2#12-12mmC	
21	1	Vacuum Pump - Hyvac 1: 91105	120	1	6.6				5-15P		15-1P	2#12-12mmC	
22	1	Digital Residual Pressure	120	1	0.3				5-15P		15-1P	2#12-12mmC	
23	1	UN-USED											
24	1	Freezer - Woods: C1011W3	120	1	3.3				5-15P		15-1P	2#12-12mmC	
	1	Circulation Fan in freezer - Delta Electronics: WFB1212HE	120	1	0.55				5-15P		15-1P	2#12-12mmC	
25	1	MDA Loss Jar Rolling Mill - Genq Inc: MIRC010-0	120	1	15				5-15P		15-1P	2#12-12mmC	
26	1	Parts Washer - Zep	120	1	1				5-15P		15-1P	2#12-12mmC	

**1 TEST FACILITY - ELECTRICAL DISTRIBUTION**  
SCALE 1:100

- DRAWING NOTES:**
- PROVIDE DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - PROVIDE DEDICATED/SPLIT DUPLEX RECEPTACLE AS INDICATED (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - PROVIDE GFCI DUPLEX RECEPTACLE (5-15R) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - PROVIDE DEDICATED DUPLEX RECEPTACLE (5-20R) FOR NEW PRINTER C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - PROVIDE TWO (2) CONTROLS TRANSFORMER FOR ADDITIONAL VAV BOXES (LOW VOLTAGE WIRING BY OTHERS) C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE. MOUNT TO UNDERSIDE OF SLAB. LOCATIONS NOT SHOWN.
  - PROVIDE DISTRIBUTION PANEL, REFER TO SLD AND PANEL SCHEDULE FOR FURTHER DETAILS.
  - PROVIDE ELECTRICAL DISTRIBUTION AS PER SLD, C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE.
  - 75KVA TRANSFORMER C/W ALL CONDUIT, WIRING AND ASSOCIATED HARDWARE. MOUNTED AT HIGH LEVEL.
  - PROVIDE NEW SECURE DOOR AS PER SECURE DOOR TYPICAL DETAIL.
  - PROVIDE 120V CIRCUIT c/w ALL ASSOCIATED CONDUIT, WIRING, FASTENERS AND HARDWARE TO LOADING DOCK UNIT HEATER. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
  - THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR THE INSTALLATION OF ELECTRICAL INFRASTRUCTURE FOR LAB EQUIPMENT ITEMS INDICATED IN THE TEST FACILITY EQUIPMENT SCHEDULE AND PANEL SCHEDULE. HOWEVER, THE CONTRACTOR MUST CONFIRM EXACT LOCATIONS OF EACH DEVICE ON SITE WITH THE GENERAL CONTRACTOR AS REQUIRED.

PANEL NAME: "CDP-T1" LOCATION: TEST FACILITY  
400A, 600V, 3Φ, 3W

DESCRIPTION	BK SIZE	BK SIZE	DESCRIPTION
75KVA DISTRIBUTION TRANSFORMER	1	2	DUST COLLECTOR FT-1
TEST FACILITY AHU-T1	3	4	SPARE
TEST FACILITY AHU-T2	5	6	SPARE
SPACE	7	8	SPACE
SPACE	9	10	SPACE
SPACE	11	12	SPACE
SPACE	13	14	SPACE
SPACE	15	16	SPACE
SPACE	17	18	SPACE
SPACE	19	20	SPACE
SPACE	21	22	SPACE
SPACE	23	24	SPACE
SPACE	25	26	SPACE
SPACE	27	28	SPACE
SPACE	29	30	SPACE

**2 TEST FACILITY - 600V CDP-T1 SCHEDULE**  
SCALE 1:100

PANEL NAME: "A-TF" LOCATION: TEST FACILITY  
225A, 120/208V, 3Φ, 4W

DESCRIPTION	BK SIZE	BK SIZE	DESCRIPTION
LAB - BALANCE	15	20	MICROWAVE OVEN - PANASONIC: NN-T795SFX
FORCED AIR OVER - QUINCY LABS	20	3	MICROWAVE OVEN - PANASONIC: JES16505HC01
FORCED AIR OVER - SHEL LAB	20	5	SIEVE SHAKER - RO-TAP: RX-29
	2P	7	SIEVE SHAKER - GILSON: SP4
	2P	8	SIEVE SHAKER - GILSON: TS-1
FORCED AIR OVER - BARNSTEAD THERMOLYNE LC-18	20	9	SIEVE SHAKER - GILSON: TS-1
LAB OVEN - QUINCY LABS: 10GC	2P	11	SIEVE SHAKER - GILSON: SP4
FREEZER - WOODS: CIRCULATION FAN IN FREEZER	15	13	GYRATORY COMPACTOR - TROXLER: 4141
TEST FACILITY RECEPTACLE GEN. PURP.	20	17	GYRATORY COMPACTOR - PINE: AFG2A
TEST FACILITY RECEPTACLE GEN. PURP.	20	19	MECHANICAL MIXER - SPAR: SP-200
TEST FACILITY RECEPTACLE GEN. PURP.	20	21	HOT PLATE - BARNSTEAD/CIMAREC: HP141925
TEST FACILITY RECEPTACLE GEN. PURP.	20	22	MARSHALL COMPRESSION MACHINE - HUMBERT: H-1322
TEST FACILITY RECEPTACLE GEN. PURP.	20	23	WATER BATH - HUMBERT: H-1390
TEST FACILITY RECEPTACLE GEN. PURP.	20	25	WATER BATH - HUMBERT: H-1394
TEST FACILITY RECEPTACLE GEN. PURP.	20	27	SPACE
TEST FACILITY RECEPTACLE GEN. PURP.	15	29	SPACE
TEST FACILITY RECEPTACLE GEN. PURP.	15	31	CENTRIFUGE EXTRACTOR - PLOOG: M207
TEST FACILITY RECEPTACLE GEN. PURP.	15	33	HIGH SPEED CENTRIFUGE - SMM
TEST FACILITY RECEPTACLE GEN. PURP.	15	35	SOLVENT RECYCLER - SPEE-DISTILL
ENTRANCE HEATER	15	37	IGNITION OVEN - TROXLER: 4155
HEAT TRACE	30	39	SPACE
EXHAUST FAN FT-2	15	43	WATER BATH HEATER - EBO-JAGER: TS-250
EXHAUST FAN FT-3	15	45	VACUUM PUMP - HYVAC 1: 91105
HEAT TRACE	15	49	DIGITAL RESIDUAL PRESSURE
LIGHTING	15	51	MDA LOSS JAR ROLLING MILL - GENQ INC: MIRC010-0
LIGHTING	15	53	Parts Washer - Zep
LIGHTING	15	55	
LIGHTING	15	57	
LIGHTING	15	59	
LIGHTING	15	61	
LIGHTING	15	63	
LIGHTING	15	65	

**3 TEST FACILITY - 120/208V A-TF SCHEDULE**  
SCALE 1:100

A	ISSUED FOR CONSTRUCTION	NOV. 22 2016
No	DESCRIPTION	DATE

**REVISIONS**

No	DESCRIPTION	DATE



client: **TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

project: **TOMLINSON**  
NEW BUILDING  
CITIGATE, OTTAWA

drawing title: **ELECTRICAL DISTRIBUTION TEST FACILITY**

scale:	AS SHOWN	drawn by:	M.G
designed by:	M.G	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	NOV. 2016

project no.:	100-16L	drawing no.:	E-206
revision:	0		

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**GENERAL/CONSTRUCTION NOTES:**

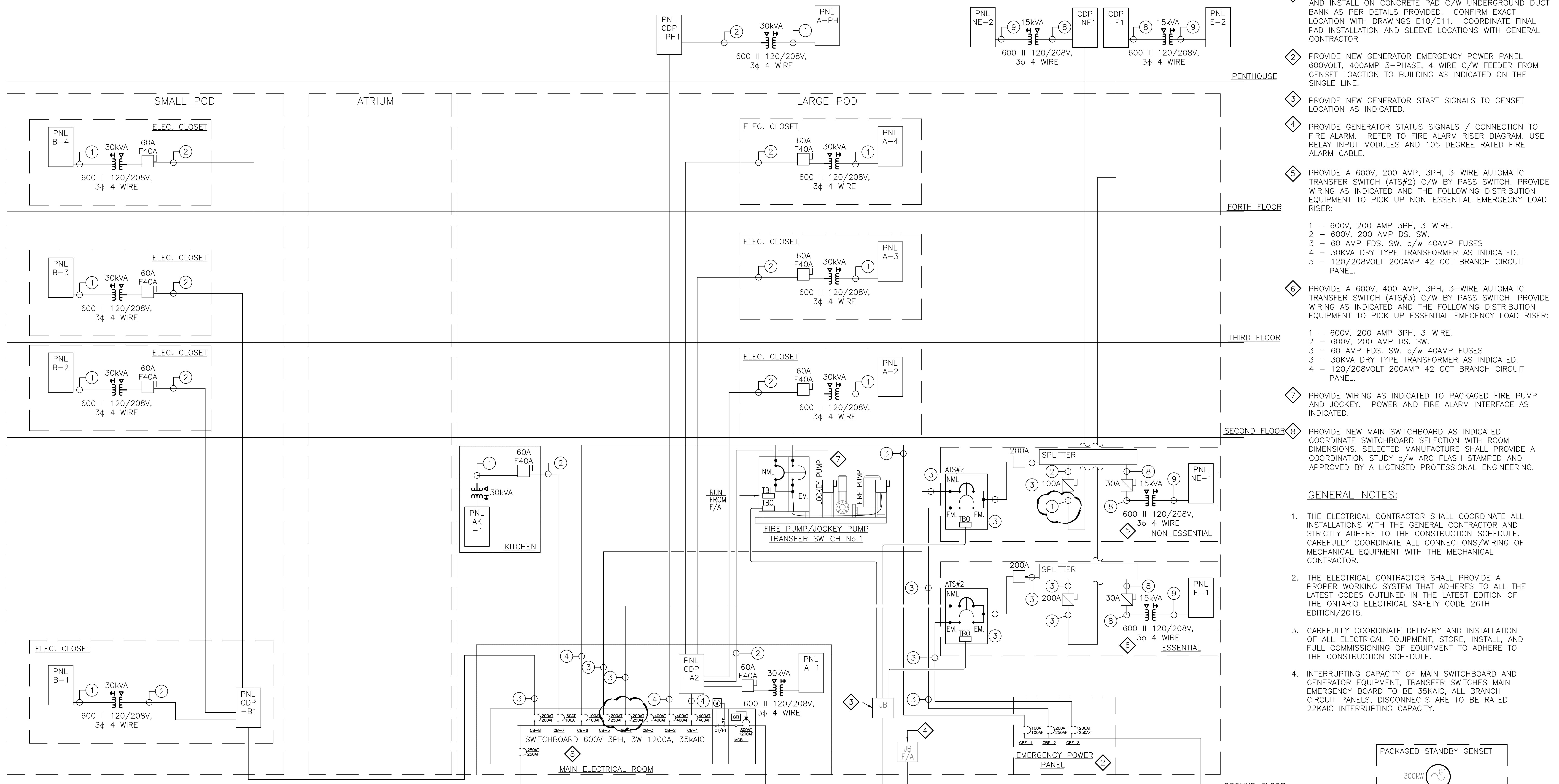
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3. ESA PLAN APPROVAL REVIEW COMMENTS.

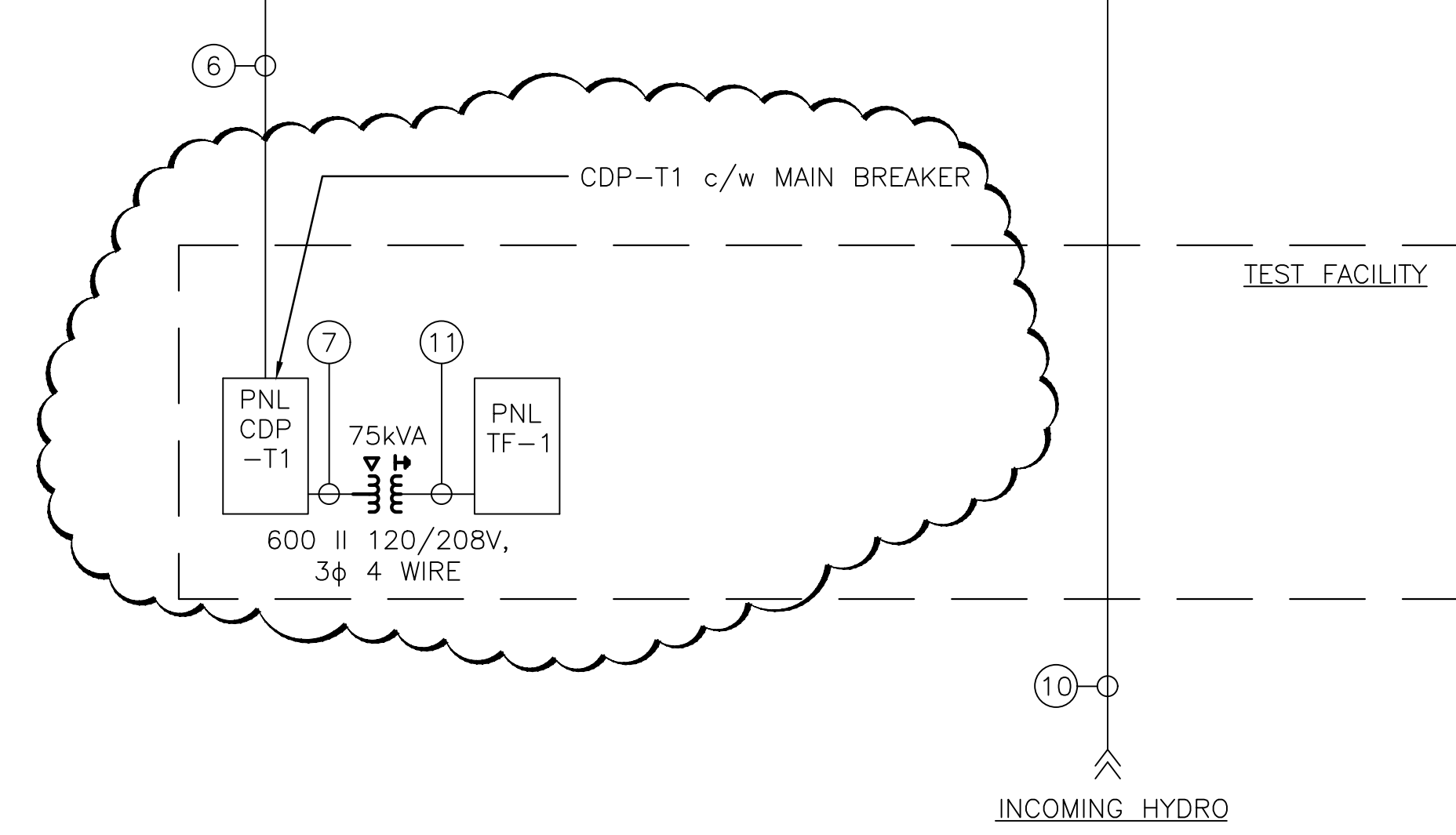
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- DRAWING NOTES:**
1. PROVIDE STANDBY POWER SYSTEM PACKAGED GENSET UNIT AND INSTALL ON CONCRETE PAD C/W UNDERGROUND DUCT BANK AS PER DETAILS PROVIDED. CONFIRM EXACT LOCATION WITH DRAWINGS E10/E11. COORDINATE FINAL PAD INSTALLATION AND SLEEVE LOCATIONS WITH GENERAL CONTRACTOR
  2. PROVIDE NEW GENERATOR EMERGENCY POWER PANEL 600VOLT, 400AMP 3-PHASE, 4 WIRE C/W FEEDER FROM GENSET LOCATION TO BUILDING AS INDICATED ON THE SINGLE LINE.
  3. PROVIDE NEW GENERATOR START SIGNALS TO GENSET LOCATION AS INDICATED.
  4. PROVIDE GENERATOR STATUS SIGNALS / CONNECTION TO FIRE ALARM. REFER TO FIRE ALARM RISER DIAGRAM. USE RELAY INPUT MODULES AND 105 DEGREE RATED FIRE ALARM CABLE.
  5. PROVIDE A 600V, 200 AMP, 3PH, 3-WIRE AUTOMATIC TRANSFER SWITCH (ATS#2) C/W BY PASS SWITCH. PROVIDE WIRING AS INDICATED AND THE FOLLOWING DISTRIBUTION EQUIPMENT TO PICK UP NON-ESSENTIAL LOAD RISER:
    - 1 - 600V, 200 AMP 3PH, 3-WIRE.
    - 2 - 600V, 200 AMP DS. SW.
    - 3 - 60 AMP FDS. SW. c/w 40AMP FUSES
    - 4 - 30KVA DRY TYPE TRANSFORMER AS INDICATED.
    - 5 - 120/208VOLT 200AMP 42 CCT BRANCH CIRCUIT PANEL.
  6. PROVIDE A 600V, 400 AMP, 3PH, 3-WIRE AUTOMATIC TRANSFER SWITCH (ATS#3) C/W BY PASS SWITCH. PROVIDE WIRING AS INDICATED AND THE FOLLOWING DISTRIBUTION EQUIPMENT TO PICK UP ESSENTIAL EMERGENCY LOAD RISER:
    - 1 - 600V, 200 AMP 3PH, 3-WIRE.
    - 2 - 600V, 200 AMP DS. SW.
    - 3 - 60 AMP FDS. SW. c/w 40AMP FUSES
    - 4 - 30KVA DRY TYPE TRANSFORMER AS INDICATED.
    - 5 - 120/208VOLT 200AMP 42 CCT BRANCH CIRCUIT PANEL.
  7. PROVIDE WIRING AS INDICATED TO PACKAGED FIRE PUMP AND JOCKEY. POWER AND FIRE ALARM INTERFACE AS INDICATED.
  8. PROVIDE NEW MAIN SWITCHBOARD AS INDICATED. COORDINATE SWITCHBOARD SELECTION WITH ROOM DIMENSIONS. SELECTED MANUFACTURE SHALL PROVIDE A COORDINATION STUDY C/W ARC FLASH STAMPED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEERING.

- GENERAL NOTES:**
1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL INSTALLATIONS WITH THE GENERAL CONTRACTOR AND STRICTLY ADHERE TO THE CONSTRUCTION SCHEDULE. CAREFULLY COORDINATE ALL CONNECTIONS/WIRING OF MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR.
  2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A PROPER WORKING SYSTEM THAT ADHERES TO ALL THE LATEST CODES OUTLINED IN THE LATEST EDITION OF THE ONTARIO ELECTRICAL SAFETY CODE 26TH EDITION/2015.
  3. CAREFULLY COORDINATE DELIVERY AND INSTALLATION OF ALL ELECTRICAL EQUIPMENT. STORE, INSTALL, AND FULL COMMISSIONING OF EQUIPMENT TO ADHERE TO THE CONSTRUCTION SCHEDULE.
  4. INTERRUPTING CAPACITY OF MAIN SWITCHBOARD AND GENERATOR EQUIPMENT, TRANSFER SWITCHES MAIN EMERGENCY BOARD TO BE 35KAIC, ALL BRANCH CIRCUIT PANELS, DISCONNECTS ARE TO BE RATED 22KAIC INTERRUPTING CAPACITY.



- EQUIPMENT I.C. RATINGS:**  
ALL 600 VOLT EQUIPMENT:  
42 KAIC  
ALL 120/208 VOLT EQUIPMENT:  
18 KAIC
- PANELBOARD CIRCUITS:**  
ALL 600 VOLT PANELS TO BE:  
42 CCT  
ALL 120/208 PANELS TO BE:  
84 CCT
- DISTRIBUTION FEEDER SIZING:**
- 1 4-#2AWG RW90 XLPE + GND IN 35mmC.
  - 2 3-#6AWG RW90 XLPE + GND IN 27mmC.
  - 3 3-#4/0 RW90 XLPE + GND IN 53mmC.
  - 4 3-#250 RW90 XLPE + GND IN 53mmC.
  - 5 2-#4-#4/0 RW90 XLPE + GND IN 53mmC.
  - 6 3-300 MCM RWU90 XLPE + GND IN 63mmC).
  - 7 3-#3AWG RW90 XLPE + GND IN 27mmC).
  - 8 3-10AWG RW90 XLPE + GND IN 21mmC).
  - 9 4-6AWG RW90 XLPE + GND IN 27mmC).
  - 10 4x(4-350MCM RWU90 XLPE + GND IN 78mmC). PROVIDE DEPTH AND DUCT BANK AS PER DIAGRAM 4 DETAIL -11.
  - 11 4-1/0 AWG RW90 XLPE + GND IN 53mmC
- CONTRACTOR NOTE:**  
GENERATOR AND FIRE PUMP POWER AND CONTROLS CABLES ARE TO BE MINERAL INSULATED (MI) 2 HR FIRE RATED. TRANSITION TO MI ABOVE GRADE FOR GENERATOR CABLES.



\*EXISTING GENSET TO BE RELOCATED FROM 5597 POWER RD.

No	DESCRIPTION	DATE
A	ISSUED FOR CONSTRUCTION	NOV. 22 2016

**REVISIONS**

client: **TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

project: **TOMLINSON**  
NEW BUILDING  
CITIGATE, OTTAWA

drawing title: **SINGLE LINE DIAGRAM**

scale: <b>AS SHOWN</b>	drawn by: <b>M.G</b>
designed by: <b>M.G</b>	reviewed by: <b>J.R.P.</b>
approved by: <b>J.R.P.</b>	date: <b>NOV. 2016</b>

project no.: <b>100-16L</b>	drawing no.: <b>E-301</b>
revision: <b>0</b>	

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PANEL NAME: 'A-1' LOCATION: LARGE POD ELEC. CLOSET 2ND FL.  
225A, 120/208V, 3A, 4W

DESCRIPTION	BRK SIZE	BRK SIZE	DESCRIPTION	BRK SIZE	BRK SIZE
WORSTATION JB	15 1	2 15	WORSTATION JB	15 1	2 15
WORSTATION JB	15 3	4 15	WORSTATION JB	15 3	4 15
WORSTATION JB	15 5	6 15	WORSTATION JB	15 5	6 15
WORSTATION JB	15 7	8 15	WORSTATION JB	15 7	8 15
WORSTATION JB	15 9	10 15	WORSTATION JB	15 9	10 15
WORSTATION JB	15 11	12 15	WORSTATION JB	15 11	12 15
WORSTATION JB	15 13	14 15	WORSTATION JB	15 13	14 15
WORSTATION JB	15 15	16 15	WORSTATION JB	15 15	16 15
WORSTATION JB	15 17	18 15	WORSTATION JB	15 17	18 15
WORSTATION JB	15 19	20 15	WORSTATION JB	15 19	20 15
WORSTATION JB	15 21	22 15	WORSTATION JB	15 21	22 15
WORSTATION JB	15 23	24 15	WORSTATION JB	15 23	24 15
WORSTATION JB	15 25	26 15	WORSTATION JB	15 25	26 15
WORSTATION JB	15 27	28 15	WORSTATION JB	15 27	28 15
WORSTATION JB	15 29	30 15	WORSTATION JB	15 29	30 15
WORSTATION JB	15 31	32 15	WORSTATION JB	15 31	32 15
WORSTATION JB	15 33	34 15	WORSTATION JB	15 33	34 15
WORSTATION JB	15 35	36 15	WORSTATION JB	15 35	36 15
WORSTATION JB	15 37	38 15	WORSTATION JB	15 37	38 15
WORSTATION JB	15 39	40 15	WORSTATION JB	15 39	40 15
WORSTATION JB	15 41	42 15	WORSTATION JB	15 41	42 15
WORSTATION JB	15 43	44 15	WORSTATION JB	15 43	44 15
WORSTATION JB	15 45	46 15	WORSTATION JB	15 45	46 15
WORSTATION JB	15 47	48 15	WORSTATION JB	15 47	48 15
HMS OFFICE RECEPABLES	15 49	50 15	OFFICE RECEPABLES	15 49	50 15
OFFICE RECEPABLES	15 51	52 15	LARGE MEETING ROOM 14 RECEPABLE	15 51	52 15
MEETING ROOM RECEPABLES	15 53	54 20	HOUSE KEEPING RECEPABLES	15 53	54 20
LIGHTING	15 55	56 15	KITCHENETTE RECEPABLE (FRIDGE)	15 55	56 15
LIGHTING	15 57	58 20	KITCHENETTE RECEPABLE (SPLIT)	15 57	58 20
EXHAUST FANS F-1	15 59	60 15	LIGHTING	15 59	60 15
WASHROOM AUTOMATIC FLUSH DEVICES	15 61	62 15	KITCHENETTE RECEPABLE	15 61	62 15
LIGHTING	15 63	64 15	KITCHENETTE RECEPABLE	15 63	64 15
GENERAL PURPOSE RECEPABLE	20 65	66 20	GENERAL PURPOSE RECEPABLES	20 65	66 20
GENERAL PURPOSE RECEPABLE	20 67	68 20	PHOTOCOPIER	20 67	68 20
GENERAL PURPOSE RECEPABLE	20 69	70 20	PHOTOCOPIER	20 69	70 20
GENERAL PURPOSE RECEPABLE	20 71	72 20	COUNTER SPACE AREA	20 71	72 20

NOTE:  
- AS PER ADDENDUM ALL 120/208V BRANCH CIRCUIT PANELS ARE TO BE BACCTS MN.

PANEL NAME: 'A-2' LOCATION: LARGE POD ELEC. CLOSET 2ND FL.  
225A, 120/208V, 3A, 4W

DESCRIPTION	BRK SIZE	BRK SIZE	DESCRIPTION	BRK SIZE	BRK SIZE
WORSTATION JB	15 1	2 15	WORSTATION JB	15 1	2 15
WORSTATION JB	15 3	4 15	WORSTATION JB	15 3	4 15
WORSTATION JB	15 5	6 15	WORSTATION JB	15 5	6 15
WORSTATION JB	15 7	8 15	WORSTATION JB	15 7	8 15
WORSTATION JB	15 9	10 15	WORSTATION JB	15 9	10 15
WORSTATION JB	15 11	12 15	WORSTATION JB	15 11	12 15
WORSTATION JB	15 13	14 15	WORSTATION JB	15 13	14 15
WORSTATION JB	15 15	16 15	WORSTATION JB	15 15	16 15
WORSTATION JB	15 17	18 15	WORSTATION JB	15 17	18 15
WORSTATION JB	15 19	20 15	WORSTATION JB	15 19	20 15
WORSTATION JB	15 21	22 15	WORSTATION JB	15 21	22 15
WORSTATION JB	15 23	24 15	WORSTATION JB	15 23	24 15
WORSTATION JB	15 25	26 15	WORSTATION JB	15 25	26 15
WORSTATION JB	15 27	28 15	WORSTATION JB	15 27	28 15
WORSTATION JB	15 29	30 15	WORSTATION JB	15 29	30 15
WORSTATION JB	15 31	32 15	WORSTATION JB	15 31	32 15
WORSTATION JB	15 33	34 15	WORSTATION JB	15 33	34 15
WORSTATION JB	15 35	36 15	WORSTATION JB	15 35	36 15
WORSTATION JB	15 37	38 15	WORSTATION JB	15 37	38 15
WORSTATION JB	15 39	40 15	WORSTATION JB	15 39	40 15
WORSTATION JB	15 41	42 15	WORSTATION JB	15 41	42 15
WORSTATION JB	15 43	44 15	WORSTATION JB	15 43	44 15
WORSTATION JB	15 45	46 15	WORSTATION JB	15 45	46 15
WORSTATION JB	15 47	48 15	WORSTATION JB	15 47	48 15
HMS OFFICE RECEPABLES	15 49	50 15	OFFICE RECEPABLES	15 49	50 15
OFFICE RECEPABLES	15 51	52 15	LARGE MEETING ROOM 14 RECEPABLE	15 51	52 15
MEETING ROOM RECEPABLES	15 53	54 20	HOUSE KEEPING RECEPABLES	15 53	54 20
LIGHTING	15 55	56 15	KITCHENETTE RECEPABLE (FRIDGE)	15 55	56 15
LIGHTING	15 57	58 20	KITCHENETTE RECEPABLE (SPLIT)	15 57	58 20
EXHAUST FANS F-1	15 59	60 15	LIGHTING	15 59	60 15
WASHROOM AUTOMATIC FLUSH DEVICES	15 61	62 15	KITCHENETTE RECEPABLE	15 61	62 15
LIGHTING	15 63	64 15	KITCHENETTE RECEPABLE	15 63	64 15
GENERAL PURPOSE RECEPABLE	20 65	66 15	KITCHENETTE RECEPABLE	15 65	66 15

NOTE:  
- AS PER ADDENDUM ALL 120/208V BRANCH CIRCUIT PANELS ARE TO BE BACCTS MN.

PANEL NAME: 'A-3' LOCATION: LARGE POD ELEC. CLOSET 3RD FL.  
225A, 120/208V, 3A, 4W

DESCRIPTION	BRK SIZE	BRK SIZE	DESCRIPTION	BRK SIZE	BRK SIZE
WORSTATION JB	15 1	2 15	WORSTATION JB	15 1	2 15
WORSTATION JB	15 3	4 15	WORSTATION JB	15 3	4 15
WORSTATION JB	15 5	6 15	WORSTATION JB	15 5	6 15
WORSTATION JB	15 7	8 15	WORSTATION JB	15 7	8 15
WORSTATION JB	15 9	10 15	WORSTATION JB	15 9	10 15
WORSTATION JB	15 11	12 15	WORSTATION JB	15 11	12 15
WORSTATION JB	15 13	14 15	WORSTATION JB	15 13	14 15
WORSTATION JB	15 15	16 15	WORSTATION JB	15 15	16 15
WORSTATION JB	15 17	18 15	WORSTATION JB	15 17	18 15
WORSTATION JB	15 19	20 15	WORSTATION JB	15 19	20 15
WORSTATION JB	15 21	22 15	WORSTATION JB	15 21	22 15
WORSTATION JB	15 23	24 15	WORSTATION JB	15 23	24 15
WORSTATION JB	15 25	26 15	WORSTATION JB	15 25	26 15
WORSTATION JB	15 27	28 15	WORSTATION JB	15 27	28 15
WORSTATION JB	15 29	30 15	WORSTATION JB	15 29	30 15
WORSTATION JB	15 31	32 15	WORSTATION JB	15 31	32 15
WORSTATION JB	15 33	34 15	WORSTATION JB	15 33	34 15
WORSTATION JB	15 35	36 15	WORSTATION JB	15 35	36 15
WORSTATION JB	15 37	38 15	WORSTATION JB	15 37	38 15
WORSTATION JB	15 39	40 15	WORSTATION JB	15 39	40 15
WORSTATION JB	15 41	42 15	WORSTATION JB	15 41	42 15
WORSTATION JB	15 43	44 15	WORSTATION JB	15 43	44 15
WORSTATION JB	15 45	46 15	WORSTATION JB	15 45	46 15
WORSTATION JB	15 47	48 15	WORSTATION JB	15 47	48 15
WORSTATION JB	15 49	50 15	WORSTATION JB	15 49	50 15
WORSTATION JB	15 51	52 15	WORSTATION JB	15 51	52 15
OFFICE RECEPABLES	15 53	54 20	HOUSE KEEPING RECEPABLES	15 53	54 20
OFFICE RECEPABLES	15 55	56 15	KITCHENETTE RECEPABLE (FRIDGE)	15 55	56 15
PHONE BOOTH RECEPABLES	15 57	58 20	KITCHENETTE RECEPABLE (SPLIT)	15 57	58 20
OFFICE RECEPABLES	15 59	60 15	LIGHTING	15 59	60 15
OFFICE RECEPABLES	15 61	62 15	KITCHENETTE RECEPABLE	15 61	62 15
OFFICE RECEPABLES	15 63	64 15	KITCHENETTE RECEPABLE	15 63	64 15
OFFICE RECEPABLES	15 65	66 40	AC-ER / AC-CR SPLIT SYSTEM AC UNIT	15 65	66 40
OFFICE RECEPABLES	15 67	68 20	OFFICE RECEPABLES	15 67	68 20
OFFICE RECEPABLES	15 69	70 40	AC-ER / AC-CR SPLIT SYSTEM AC UNIT	15 69	70 40
OFFICE RECEPABLES	15 71	72 20	OFFICE RECEPABLES	15 71	72 20
OFFICE RECEPABLES	15 73	74 20	EQUIPMENT AREA	15 73	74 20
OFFICE RECEPABLES	15 75	76 20	EQUIPMENT AREA	15 75	76 20
OFFICE RECEPABLES	15 77	78 20	EQUIPMENT AREA	15 77	78 20
OFFICE RECEPABLES	15 79	80 20	EQUIPMENT AREA	15 79	80 20
OFFICE RECEPABLES	15 81	82 15	OFFICE RECEPABLES	15 81	82 15
OFFICE RECEPABLES	15 83	84 15	OFFICE RECEPABLES	15 83	84 15

NOTE:  
- AS PER ADDENDUM ALL 120/208V BRANCH CIRCUIT PANELS ARE TO BE BACCTS MN.

PANEL NAME: 'A-4' LOCATION: LARGE POD ELEC. CLOSET 4TH FL.  
225A, 120/208V, 3A, 4W

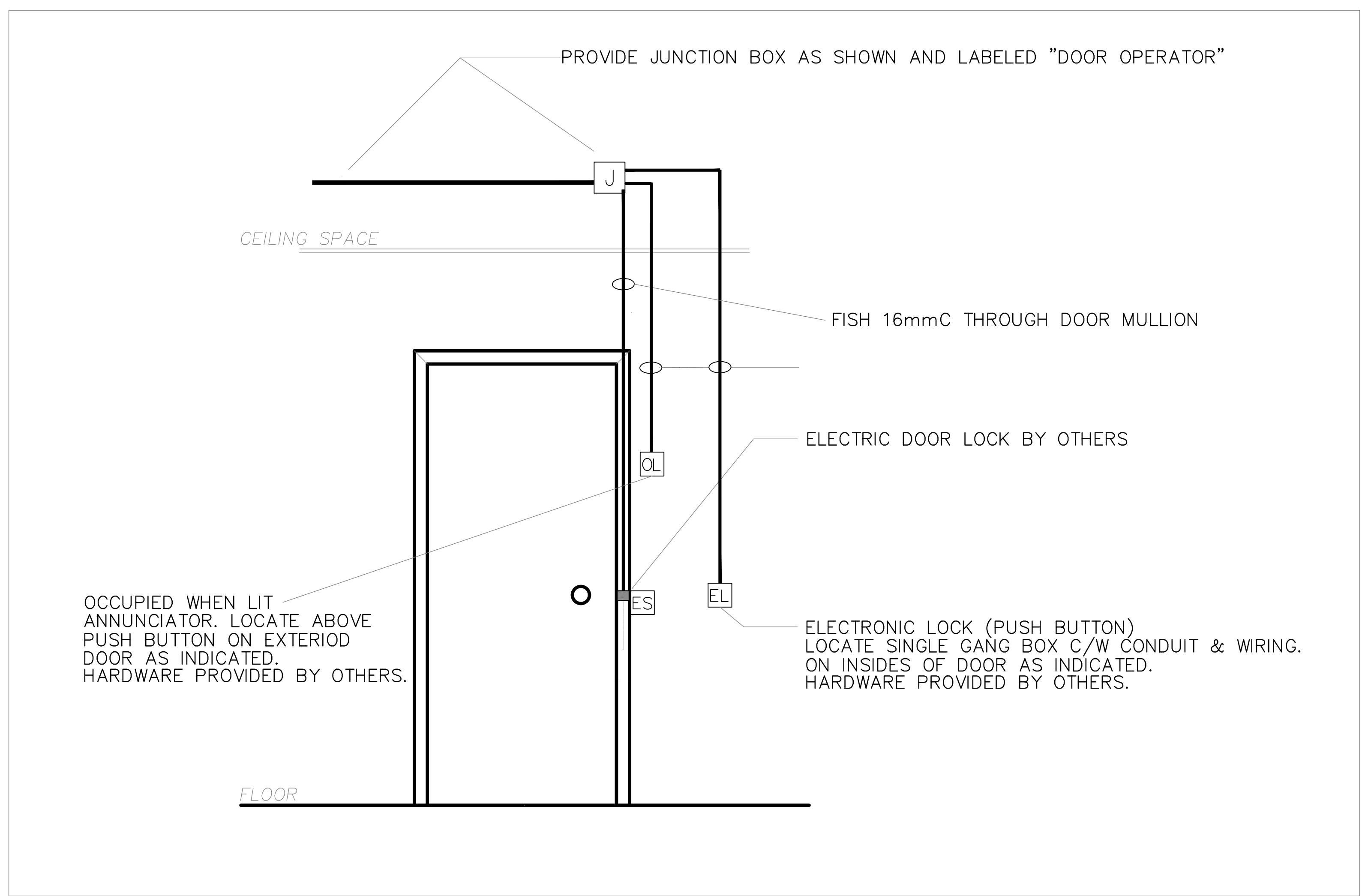
DESCRIPTION	BRK SIZE	BRK SIZE	DESCRIPTION	BRK SIZE	BRK SIZE
WORSTATION JB	15 1	2 15	WORSTATION JB	15 1	2 15
WORSTATION JB	15 3	4 15	WORSTATION JB	15 3	4 15
WORSTATION JB	15 5	6 15	WORSTATION JB	15 5	6 15
WORSTATION JB	15 7	8 15	WORSTATION JB	15 7	8 15
WORSTATION JB	15 9	10 15	WORSTATION JB	15 9	10 15
WORSTATION JB	15 11	12 15	WORSTATION JB	15 11	12 15
WORSTATION JB	15 13	14 15	WORSTATION JB	15 13	14 15
WORSTATION JB	15 15	16 15	WORSTATION JB	15 15	16 15
WORSTATION JB	15 17	18 15	WORSTATION JB	15 17	18 15
WORSTATION JB	15 19	20 15	WORSTATION JB	15 19	20 15
WORSTATION JB	15 21	22 15	WORSTATION JB	15 21	22 15
WORSTATION JB	15 23	24 15	WORSTATION JB	15 23	24 15
WORSTATION JB	15 25	26 15	WORSTATION JB	15 25	26 15
WORSTATION JB	15 27	28 15	WORSTATION JB	15 27	28 15
WORSTATION JB	15 29	30 15	WORSTATION JB	15 29	30 15
OFFICE RECEPABLE	15 31	32 15	WORSTATION JB	15 31	32 15
OFFICE RECEPABLE	15 33	34 15	WORSTATION JB	15 33	34 15
WORSTATION JB	15 35	36 15	WORSTATION JB	15 35	36 15
WORSTATION JB	15 37	38 15	WORSTATION JB	15 37	38 15
WORSTATION JB	15 39	40 15	WORSTATION JB	15 39	40 15
WORSTATION JB	15 41	42 15	WORSTATION JB	15 41	42 15
WORSTATION JB	15 43	44 15	WORSTATION JB	15 43	44 15
WORSTATION JB	15 45	46 15	WORSTATION JB	15 45	46 15
WORSTATION JB	15 47	48 15	WORSTATION JB	15 47	48 15
WORSTATION JB	15 49	50 15	WORSTATION JB	15 49	50 15
WORSTATION JB	15 51	52 15	WORSTATION JB	15 51	52 15
WORSTATION JB	15 53	54 20	WORSTATION JB	15 53	54 20
WORSTATION JB	15 55	56 15	WORSTATION JB	15 55	56 15
WORSTATION JB	15 57	58 20	WORSTATION JB	15 57	58 20
WORSTATION JB	15 59	60 15	WORSTATION JB	15 59	60 15
OFFICE RECEPABLES	15 61	62 15	OFFICE RECEPABLES	15 61	62 15
OFFICE RECEPABLES	15 63	64 15	OFFICE RECEPABLES	15 63	64 15
OFFICE RECEPABLES	15 65	66 15	OFFICE RECEPABLES	15 65	66 15
OFFICE RECEPABLES	15 67	68 15	OFFICE RECEPABLES	15 67	68 15
OFFICE RECEPABLES	15 69	70 15	OFFICE RECEPABLES	15 69	70 15
OFFICE RECEPABLES	15 71	72 15	OFFICE RECEPABLES	15 71	72 15
OFFICE RECEPABLES	15 73	74 15	OFFICE RECEPABLES	15 73	74 15
OFFICE RECEPABLES	15 75	76 15	OFFICE RECEPABLES	15 75	76 15
OFFICE RECEPABLES	15 77	78 15	OFFICE RECEPABLES	15 77	78 15
OFFICE RECEPABLES	15 79	80 15	OFFICE RECEPABLES	15 79	80 15
OFFICE RECEPABLES	15 81	82 15	OFFICE RECEPABLES	15 81	82 15
OFFICE RECEPABLES	15 83	84 15	OFFICE RECEPABLES	15 83	84 15

NOTE:  
- AS PER ADDENDUM ALL 120/208V BRANCH CIRCUIT PANELS ARE TO BE BACCTS MN.

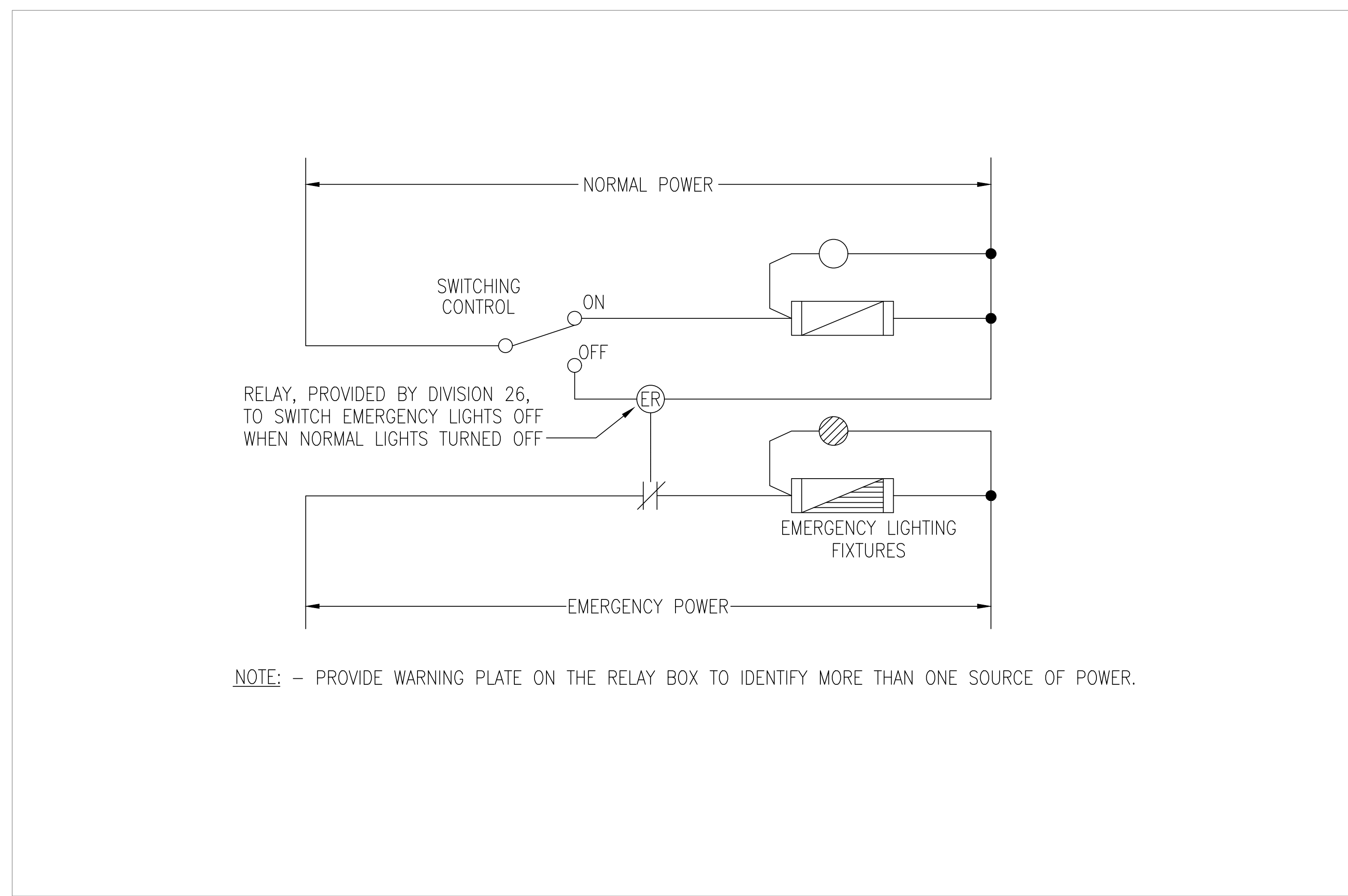
PANEL NAME: 'A-1' LOCATION: KITCHEN  
225A, 120/208V, 3A, 4W

DESCRIPTION	BRK SIZE	BRK SIZE	DESCRIPTION	BRK SIZE	BRK SIZE
BEVERAGE BLENDERS	20 1	2 15	SPARE	20 1	2 15
UNDERCOUNTER REFRIGERATORS (2)	20 3	4 15	UNDERCOUNTER REFRIGERATORS (2)	20 3	4 15
COMPUTER PLUG IN CATERVA	20 5	6 15	COMPUTER PLUG IN CATERVA	20 5	6 15
COUNTER PLUG IN CATERVA	20 7	8 15	COUNTER PLUG IN CATERVA	20 7	8 15
WAREWASHER	20 9	10 40	WAREWASHER	20 9	10 40
ESPRESSO MACHINE NO.2	20 11	12 20	ESPRESSO MACHINE NO.2	20 11	12 20
ESPRESSO MACHINE NO.2	20 13	14 15	ESPRESSO MACHINE NO.2	20 13	14 15
ESPRESSO MACHINE NO.2	20 15	16 15	ESPRESSO MACHINE NO.2	20 15	16 15
ESPRESSO MACHINE NO.2	20 17	18 15	ESPRESSO MACHINE NO.2	20 17	18 15
ESPRESSO MACHINE NO.2	20 19	20 15	ESPRESSO MACHINE NO.2	20 19	20 15
ESPRESSO MACHINE NO.2	20 21	22 15	ESPRESSO MACHINE NO.2	20 21	22 15
ESPRESSO MACHINE NO.2	20 23	24 15	ESPRESSO MACHINE NO.2	20 23	24 15
ESPRESSO MACHINE NO.2	20 25	26 15	ESPRESSO MACHINE NO.2	20 25	26 15
ESPRESSO MACHINE NO.2	20 27	28 15	ESPRESSO MACHINE NO.2	20 27	28 15
ESPRESSO MACHINE NO.2	20 29	30 15	ESPRESSO MACHINE NO.2	20 29	30 15
ESPRESSO MACHINE NO.2	20 31	32 15	ESPRESSO MACHINE NO.2	20 31	32 15
ESPRESSO					





1 UNIVERSAL WASHROOM  
304 SCALE NTS



2 TYPICAL MEETING ROOM – EMERGENCY LIGHT CONTROL  
304 SCALE NTS

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Authorized modifications must be signed and sealed by an engineer and this engineer will be completely responsible for these modifications. J.R.P. Engineering is not and will not be responsible for the consequences of these modifications or for modifications carried out without its consent.

**GENERAL/CONSTRUCTION NOTES:**

1. THE ISSUED FOR CONSTRUCTION SET OF DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE FOLLOWING ADDITIONAL CONTRACT DOCUMENTS:
    - .1 NOOGA COMMS/AV/SECURITY DRAWINGS.
    - .2 ADDENDUMS E1 THROUGH E4.
    - .3 ESA PLAN APPROVAL REVIEW COMMENTS.
- NOTE: SOME CHANGES FROM ADDENDUMS ARE NOT SHOWN ON THE DRAWINGS. HOWEVER THE CONTRACTOR SHOULD COORDINATE AND KEEP A PROPER WORKING COPY OF THE ADDENDUMS AND ONGOING AS-BUILT DRAWINGS ON SITE AT ALL TIMES.

No	DESCRIPTION	DATE
A	ISSUED FOR CONSTRUCTION	NOV. 22 2016

**REVISIONS**



client:  
**TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

project:  
**TOMLINSON**  
NEW BUILDING  
CITIGATE, OTTAWA

drawing title:  
**TYPICAL DETAILS**

scale:	AS SHOWN	drawn by:	M.G
designed by:	M.G	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	NOV. 2016

project no.:	100-16L	drawing no.:	E-304
revision:	0		

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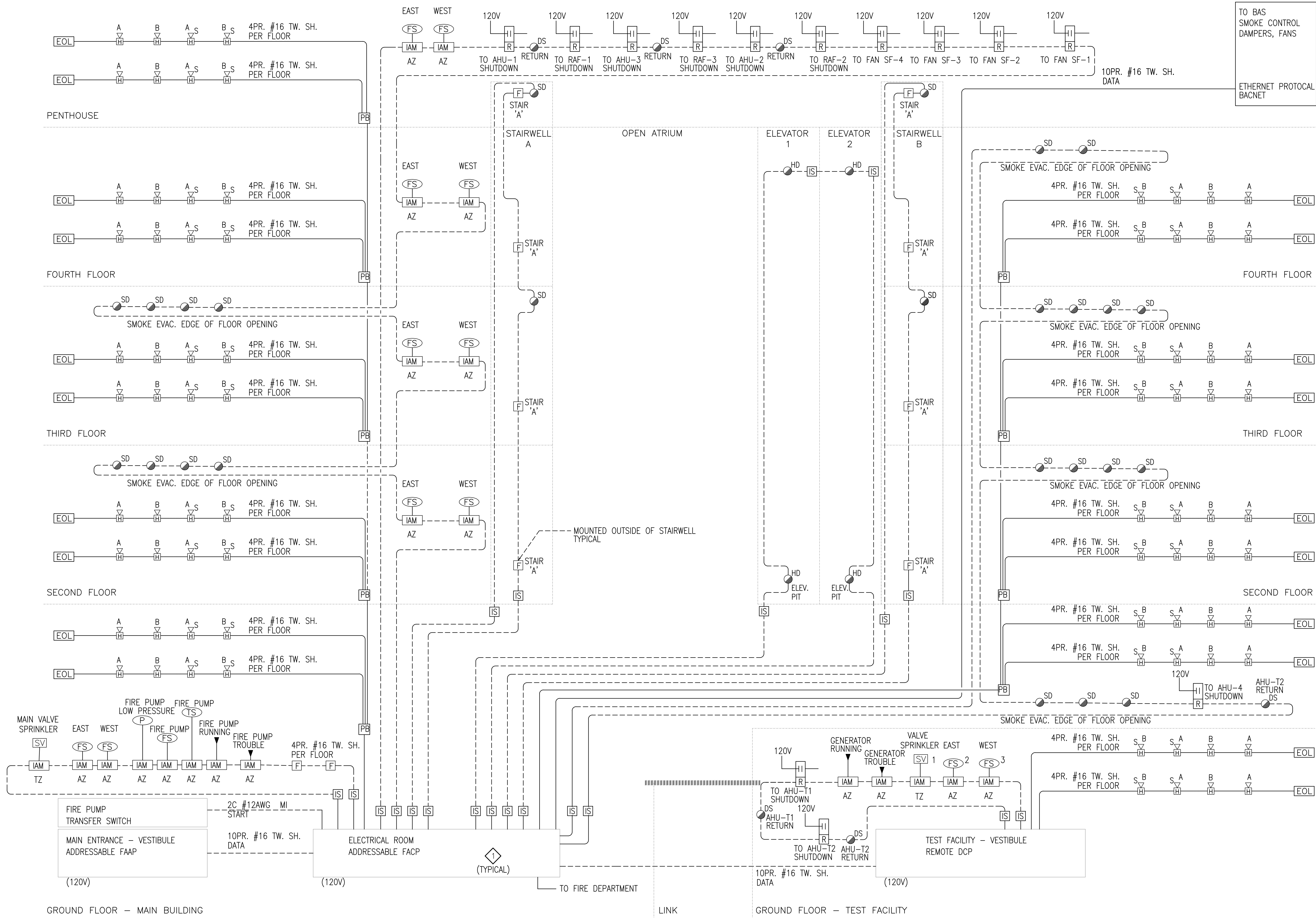
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**DRAWING NOTES:**

- 1. THE ELECTRICAL CONTRACTOR SHALL INSTALL A FIRE ALARM SYSTEM SIMILAR TO THE RISER DIAGRAM DETAILED ABOVE. FINAL SYSTEM COMPONENTS, FIRE ALARM PANEL MODULE, COMPONENT CARDS, I/O, INITIATING DEVICES, SIGNALING APPLIANCES, AND CONDUIT RUNS ARE TO BE DETERMINED BY THE CONTRACTOR BASED ON THE PARTICULAR SYSTEM THAT IS SELECTED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE - AS A MINIMUM THE QUANTITY OF INITIATING DEVICES, SIGNALING APPLIANCES AND CONTROL PANELS SHOWN ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A SYSTEM THAT MEETS THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION OVER FIRE ALARM INSTALLATIONS. THE FIRE ALARM SYSTEM SHALL BE RECEIVED FINAL INSPECTION BY THE CITY OF OTTAWA BUILDING INSPECTOR.
- 2. ALL FIRE ALARM SIGNAL CIRCUITS TO BE A MINIMUM #14AWG, 105° DEGREE RATED FAS TYPE.
- 3. PROVIDE SIGNAL BOOSTERS FOR STROBE CIRCUITS AS REQUIRED c/w 120V CIRCUITS TO BOOSTER PANEL LOCATIONS AS REQUIRED. LOCATIONS FOR BOOSTER PANELS TO BE COORDINATED ON SITE AS REQUIRED.
- 4. MINIMUM SIZE CONDUIT RACEWAY FOR FIRE ALARM SYSTEM IN 21mmC.
- 5. FIRE ALARM ADDRESSABLE LOOP TO BE EXTENDED TO WATER ENTRY ROOM, PROVIDE INTELLIGENT ADDRESSABLE INPUT MODULES TO FIRE PUMP CONTROL PANEL, TAMPER SWITCHES, FLOW SWITCHES AS REQUIRED.
- 6. ALL FIRE ALARM INITIATING CIRCUITS ARE TO BE STRICTLY RUN AS CLASS 'A' CIRCUITS MAINTAIN MINIMUM CLEARANCE AS REQUIRED THROUGHOUT. INITIATING CIRCUIT WIRING TO BE #16AWG, 105° DEGREE FAS TYPE, TWISTED, SHIELDED.
- 7. FIRE ALARM REQUIREMENTS FOR ATRIUM SMOKE EVAC SEQUENCE TO BE AS FOLLOWS:
  - 1 - SMOKE IS DETECTED IN ZONE X
  - 2 - ATRIUM DOORS OPEN
  - 3 - AHU #2 SA FAN OFF
  - 4 - RA FAN OFF AT AHU #2
  - 5 - ATRIUM SMOKE EXHAUST DAMPER OPENS
  - 6 - ATRIUM SMOKE EXHAUST FAN ON
  - 7 - AHU SA FAN SERVING ZONE X OFF
  - 8 - RA FAN SERVING ZONE X OFF
  - 9 - ZONE X RA DAMPER REMAINS OPEN
  - 10 - ZONE X SA DAMPER REMAINS OPEN
  - 11 - ZONE X VAV DAMPERS TO FULL OPEN
  - 12 - ZONE X VAV DAMPERS TO FULL OPEN
  - 13 - ALL OTHER RA AND SA DAMPERS CLOSE ON FLOORS ABOVE AND BELOW ZONE X
  - 14 - RA FAN DAMPER #1 CLOSES AT AHU SERVING ZONE X
  - 15 - RA FAN DAMPER #2 CLOSES AT AHU SERVING ZONE X
  - 16 - EA DAMPER CLOSES AT AHU SERVING ZONE X
  - 17 - MAIN OA DAMPER OPENS 100% AT AHU SERVING ZONE X
  - 18 - SMOKE EXHAUST DAMPER OPENS AT AHU SERVING ZONE X
  - 19 - SMOKE EXHAUST FAN ON AT AHU SERVING ZONE X
  - 20 - AHU SA FAN SERVING ZONE X ON AND SET TO SMOKE CONTROL SPEED SETPOINT
  - 21 - AHU SA FAN SERVING OPPOSITE SIDE OF ATRIUM TO ZONE X OFF

No	DESCRIPTION	DATE
A	ISSUED FOR CONSTRUCTION	NOV. 22 2016

**REVISIONS**

Client: **TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

Project: **TOMLINSON**  
NEW BUILDING  
CHITGATE, OTTAWA

Drawing title: **FIRE ALARM RISER DIAGRAM**

Scale:	AS SHOWN	Drawn by:	M.G.
Designed by:	M.G.	Reviewed by:	J.R.P.
Approved by:	J.R.P.	Date:	NOV. 2016

Project no.:	100-16L	Drawing no.:	E-306
Revision:	0		

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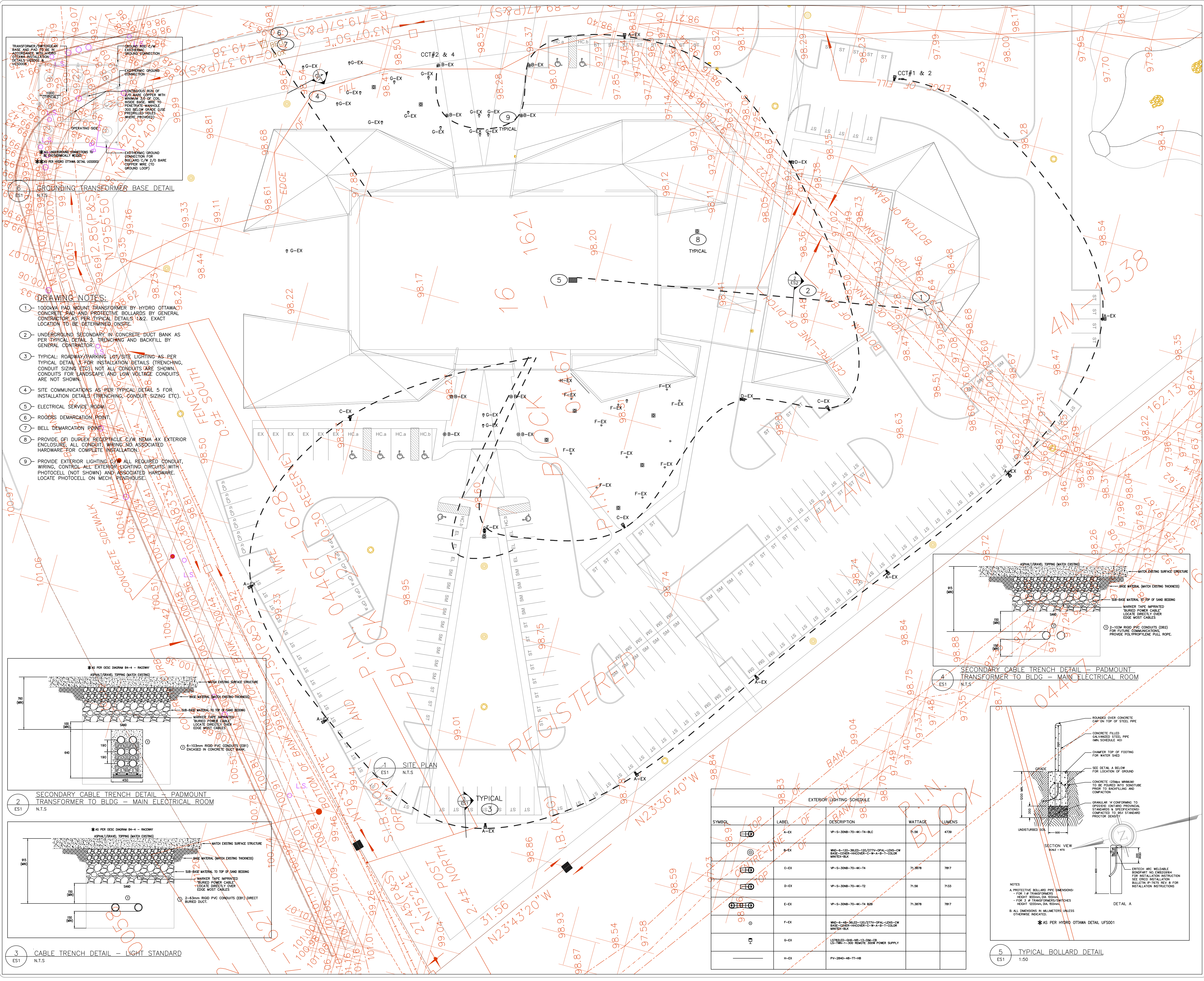
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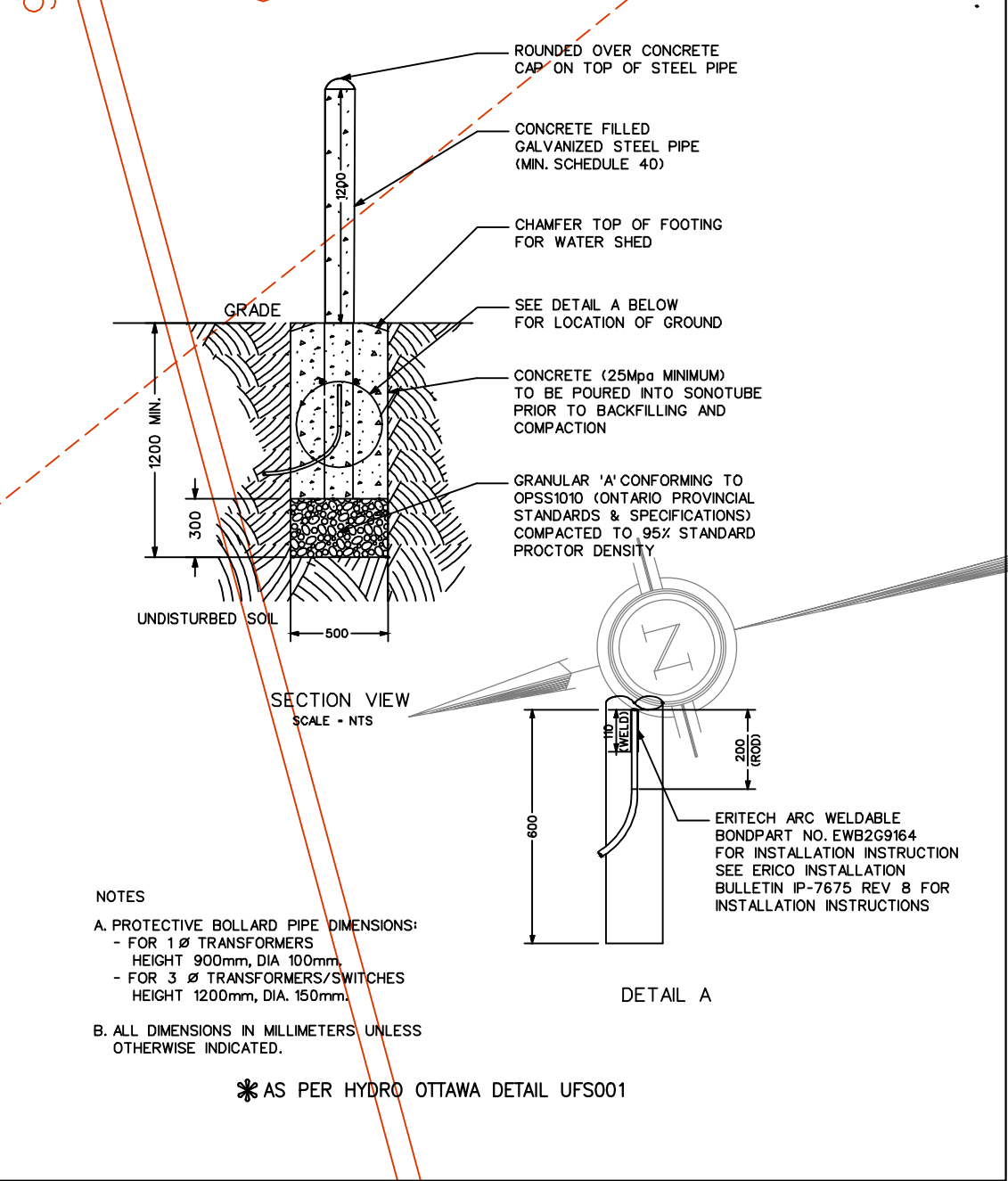
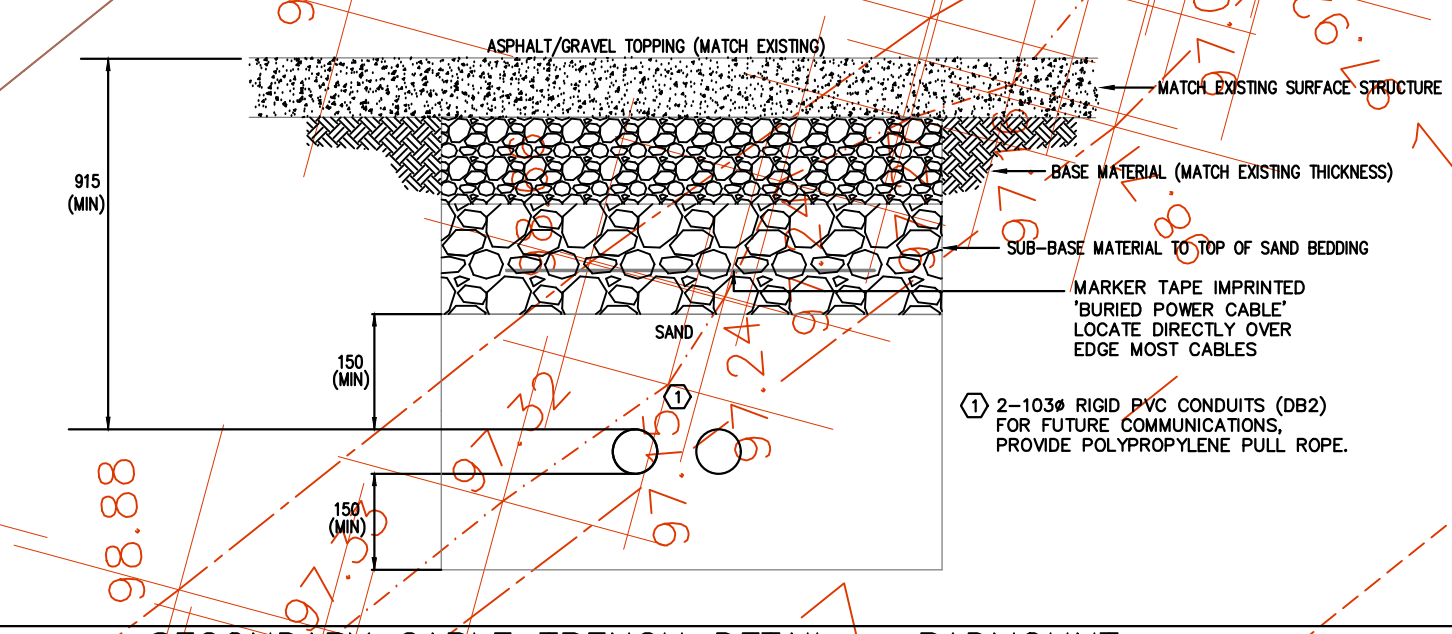
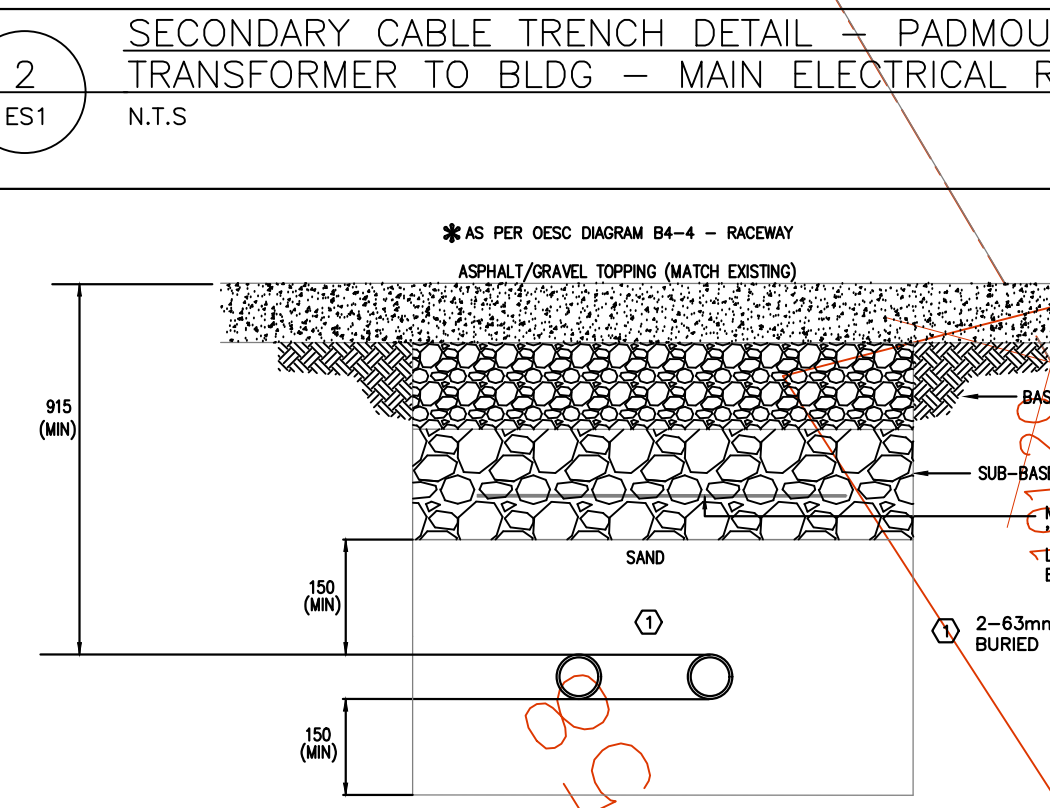
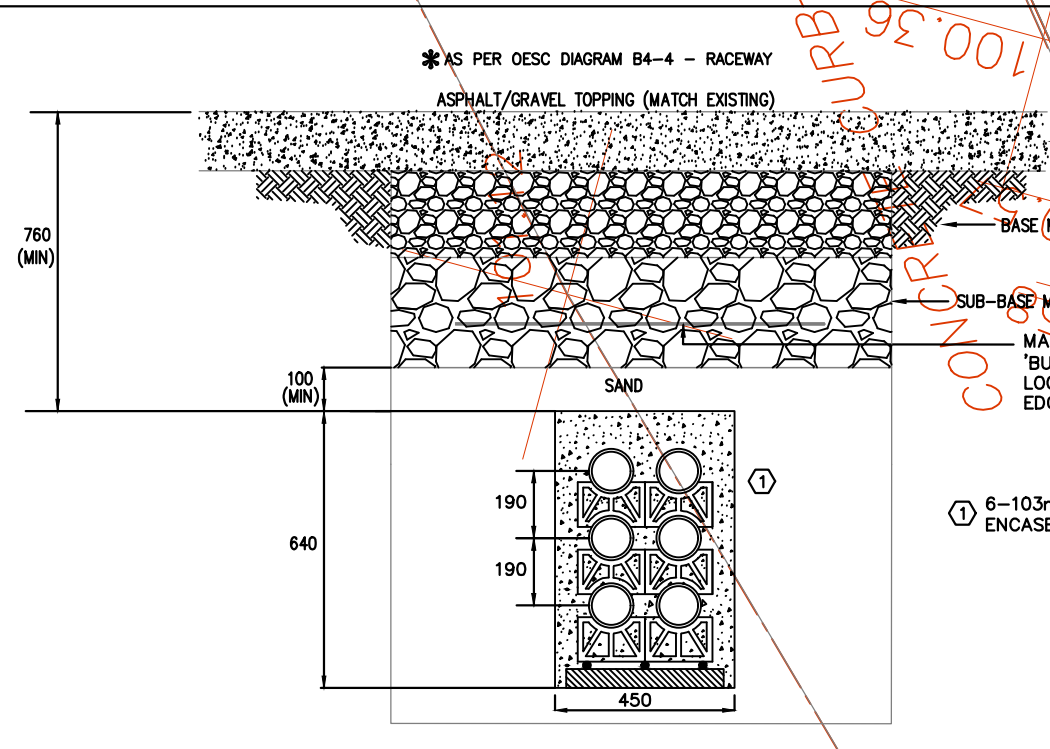
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**DRAWING NOTES:**

1. 1000VA PAD MOUNT TRANSFORMER BY HYDRO OTTAWA. CONCRETE PAD AND PROTECTIVE BOLLARDS BY GENERAL CONTRACTOR AS PER TYPICAL DETAILS 1&2. EXACT LOCATION TO BE DETERMINED ON SITE.
2. UNDERGROUND SECONDARY IN CONCRETE DUCT BANK AS PER TYPICAL DETAIL 2. TRENCHING AND BACKFILL BY GENERAL CONTRACTOR.
3. TYPICAL: ROADWAY/PARKING LOT/SITE LIGHTING AS PER TYPICAL DETAIL 3 FOR INSTALLATION DETAILS (TRENCHING, CONDUIT SIZING ETC). NOT ALL CONDUITS ARE SHOWN. CONDUITS FOR LANDSCAPE AND LOW VOLTAGE CONDUITS ARE NOT SHOWN.
4. SITE COMMUNICATIONS AS PER TYPICAL DETAIL 5 FOR INSTALLATION DETAILS (TRENCHING, CONDUIT SIZING ETC).
5. ELECTRICAL SERVICE ROOM.
6. ROGERS DEMARCATION POINT.
7. BELL DEMARCATION POINT.
8. PROVIDE ONE DUPLEX RECEPTACLE C/W NEMA 4X EXTERIOR ENCLOSURE. ALL CONDUIT WIRING AND ASSOCIATED HARDWARE FOR COMPLETE INSTALLATION.
9. PROVIDE EXTERIOR LIGHTING C/W ALL REQUIRED CONDUIT, WIRING, CONTROL AND EXTERIOR LIGHTING FIXTURES WITH PHOTOCELL (NOT SHOWN) AND ASSOCIATED HARDWARE. LOCATE PHOTOCELL ON MECH. PENTHOUSE.

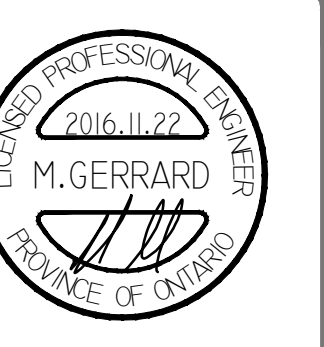


**EXTERIOR LIGHTING SCHEDULE**

SYMBOL	LABEL	DESCRIPTION	WATTAGE	LUMENS
[Symbol]	A-EX	VP-S-308-70-4K-14-BLC	71.56	4739
[Symbol]	B-EX	WID-4-120-34LED-120/277V-OPAL-LENS-CW BASE-COVER-HOOPER-C-W-A-B-T-COLOR WHITE-8X		
[Symbol]	C-EX	VP-S-308-70-4K-14	71.56	7817
[Symbol]	D-EX	VP-S-308-70-4K-12	71.56	7133
[Symbol]	E-EX	VP-S-308-70-4K-14-822	71.56	7817
[Symbol]	F-EX	WID-4-120-34LED-120/277V-OPAL-LENS-CW BASE-COVER-HOOPER-C-W-A-B-T-COLOR WHITE-8X		
[Symbol]	G-EX	LET8ED-016-18-13-DM-08 LS-TW-1-300 REMOTE 300W POWER SUPPLY		
[Symbol]	H-EX	PN-280-68-TB-H		

**REVISIONS**

No	DESCRIPTION	DATE
A	ISSUED FOR CONSTRUCTION	NOV. 22 2016



**TOMLINSON**  
5597 POWER RD  
OTTAWA, ON  
K1G 3N4

**TOMLINSON**  
NEW BUILDING  
CITIGATE, OTTAWA

**ELECTRICAL SITE PLAN**

Scale: AS SHOWN  
Designed by: M.G.  
Approved by: J.R.P.

Project no.: 100-16L  
Revision: 0  
Drawing no.: ES1