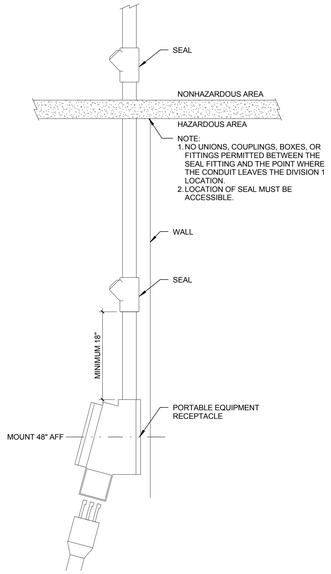
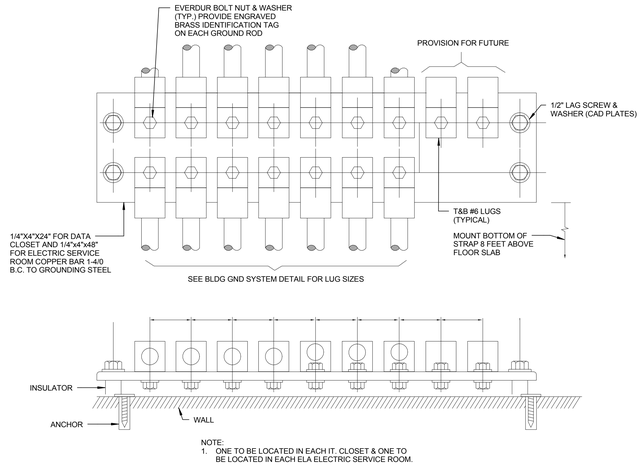
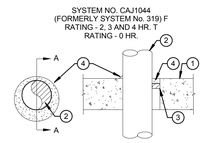


1 XP ROOM RECEPTACLE
E-800-C N.T.S.



NOTE:
1. ONE TO BE LOCATED IN EACH IT. CLOSET & ONE TO BE LOCATED IN EACH ELA ELECTRIC SERVICE ROOM.

2 GROUNDING BUSBAR DETAIL
E-800-C N.T.S.



1. FLOOR OR WALL ASSEMBLY - LIGHTWEIGHT OR NORMAL WEIGHT (100-150 LB PER CU FT) CONCRETE. EXCEPT AS NOTED IN TABLE UNDER ITEM 4, MIN. THICKNESS OF SOLID CONCRETE FLOOR OR WALL ASSEMBLY IS 4 1/2". WALL ASSEMBLY MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAMETER OF CIRCULAR THROUGH OPENING IS 32". SEE CONCRETE BLOCK (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. PIPE OR CONDUIT - NOM 30" DIAMETER (OR SMALLER) CAST IRON OR SCHEDULE 10 (OR HEAVIER) STEEL PIPE. NOM. 6" DIA. (OR SMALLER) STEEL CONDUIT, NOM. 3" DIA. (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBE OR NOM. 4" DIA. (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING MAX. ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING NOT TO EXCEED 2". MIN. ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING IS ZERO INCHES (POINT OF CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. PACKING MATERIAL - POLYETHYLENE BACKER ROD OR NOM. 1" THICKNESS OF TIGHTLY-PACKED MINERAL WOOL BATT OR GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL (ITEM 4).

4. FILL, VOID OR CAVITY MATERIAL* - CAULK - APPLIED TO FILL THE ANNULAR SPACE FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED CAULK THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL, FLUSH WITH WALL SURFACE. THE HOURLY F RATINGS AND THE MIN. REQUIRED CAULK THICKNESS ARE DEPENDENT UPON A NUMBER OF PARAMETERS, AS SHOWN IN THE FOLLOWING TABLE:

MIN FLOOR OR WALL THKNS, IN.	NOM. PIPE TUBE/CONDUIT DIA./IN.	MAX. ANNULAR SPACE, IN.	MIN. CAULK THKNS, IN.	F HATING, HR.
2-1/2	1/2-12	1-3/8	1/2	2
2-1/2	1/2-6	2-3/8	1	2
4-1/2	1/2-6	1-3/8	1/4(A)	2
4-1/2	1/2-12	1-1/4	1/2	3
4-1/2	1/2-20	2	1	3
4-1/2	22-30	2	2	3
5-1/2	1/2-6	1-3/8	1(B)	4

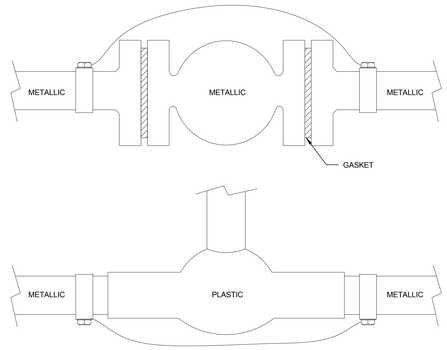
(A) MIN. 2" THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE.

(B) MIN. 1" THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. MIN. 1" THICKNESS OF CAULK TO BE INSTALLED FLUSH WITH EACH SURFACE OF FLOOR OR WALL ASSEMBLY.

MINNESOTA MINING & MANUFACTURING CO. - TYPES CP-25 WB, CP-25 WB+

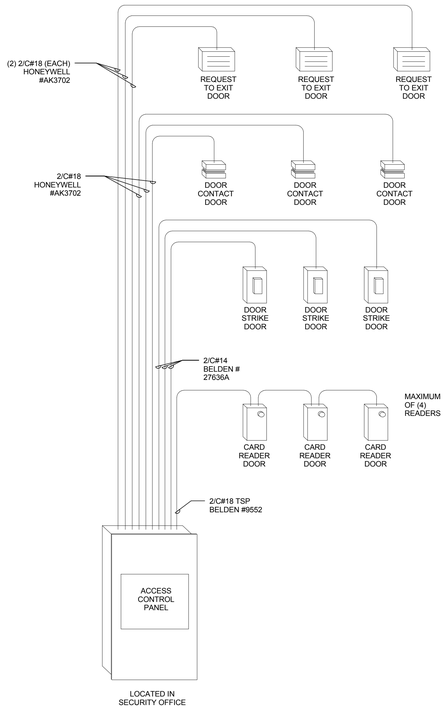
*BEARING THE UL CLASSIFICATION MARKING

3 PENETRATION OF 2, 3 & 4 HOUR RATED CONCRETE FLOOR OR CONCRETE/BLOCK WALL
E-800-C N.T.S.



NOTE:
PROVIDE BRAIDED BONDING STRAP AROUND PLASTIC DEVICES AND CONDUCTIVE DEVICES ISOLATED BY NON-CONDUCTIVE GASKETS, WASHERS, OR SEALS.

4 STATIC PIPE GROUND BONDING SCHEME
E-800-C N.T.S.



ACCESS CONTROL SYSTEM NOTES:

1. FURNISH AND INSTALL ACCESS CONTROL SYSTEM EQUIPMENT INCLUDING CARD READERS, DOOR STRIKES, DOOR CONTACTS, REQUEST TO EXIT DEVICES, CABLING, SUPPORTS, TERMINATION AND TESTING AND ASSOCIATED HARDWARE NECESSARY FOR ADDITIONS TO EXISTING SYSTEMS.

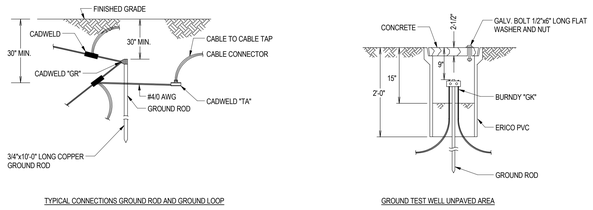
2. ACCESS CONTROL EQUIPMENT TO INCLUDE:

HONEYWELL	DR4208S	CARD READER
TO BE SELECTED BY ARCHITECT		DOOR STRIKE, 24VDC
SENTROL	1076M-W	MAGNETIC DOOR CONTACT
KANTECH	T.REX.LT	REQUEST TO EXIT DEVICE

3. RISER DIAGRAM DOES NOT ATTEMPT TO DEPICT ACTUAL QUANTITIES OF DEVICES FOR PROJECT. E. C. SHALL REFER TO PLANS FOR QUANTITIES NEEDED.

4. REFERENCE MANUFACTURER'S DRAWINGS AND EQUIPMENT SPECIFICATIONS FOR TERMINATIONS, WIRING DIAGRAMS, AND INSTALLATION DETAILS.

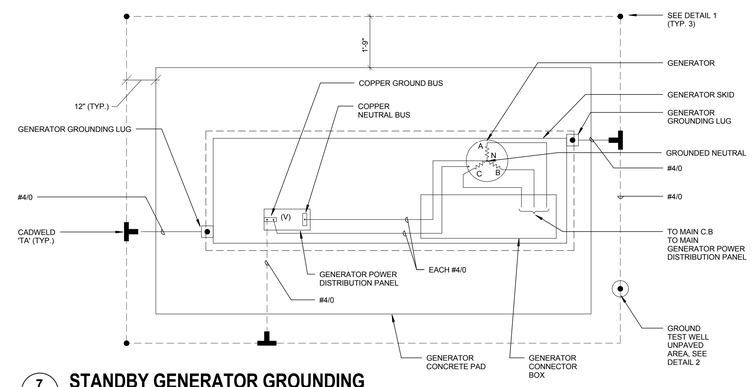
5 RISER DIAGRAM-ACCESS CONTROL SYSTEM
E-800-C N.T.S.



TYPICAL CONNECTIONS GROUND ROD AND GROUND LOOP

GROUND TEST WELL UNPAVED AREA

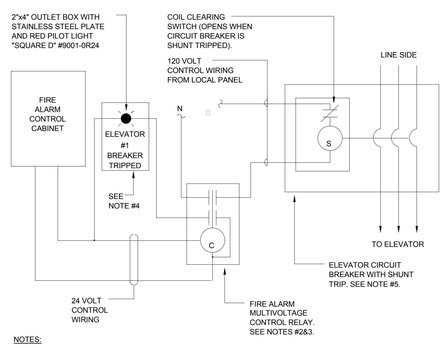
6 GROUNDING DETAILS
E-800-C 3/4" = 1'-0"



7 STANDBY GENERATOR GROUNDING
E-800-C 1/2" = 1'-0"

TYPE OF CONNECTION		COPPER CABLE BOLTED (BURNDY)	COPPER CABLE IDENTIFIED (BURNDY)	COPPER CABLE WELDED (BURNDY)	COPPER CABLE WELDED (CADWELD)	ALUM. CABLE BOLTED (BURNDY)	ALUM. CABLE IDENTIFIED (BURNDY)
"A" CABLE ROD		GAR	YGHR-C	CR-2	GY	GAR-W	
CABLE "B" LUG		QA	YA	CB-1	LA	KA-A	YA-A-TN
"C" CABLE		KSU	YYT	CC-2	TA	KSU	YTU
"D" PIPE OR CONDUIT CABLE		GAR		CS-3 OR CS-4	VS	GAR-W	
"E" COLUMN BLDG STEEL CABLE		GB		CS-3 OR CS-4	VS OR VV	GB-W	
"F" CABLE		GX		CC4	XA	GX-W	
RAIL CABLE	G			R-1	J		
	H			R-LX	J		

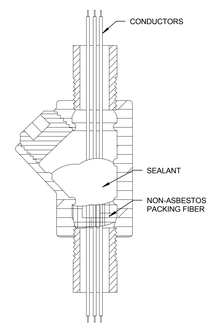
8 CONNECTION TYPE SCHEDULE
E-800-C 1 1/2" = 1'-0"



NOTES:

1. PROVIDE SEPARATE CONTROL OF EACH ELEVATOR OR ELEVATOR BANK AS NOTED BY LOCATION OF SHUNT TRIP BREAKER FOR ELEVATORS. REFER TO ONE LINE DIAGRAM. EXACT WIRING DIAGRAM SHALL BE PER FIRE ALARM MANUFACTURERS SHOP DRAWINGS.
2. LOCATE CONTROL RELAY IN SEPARATE METAL ENCLOSURE ADJACENT TO FIRE ALARM CABINET.
3. PROVIDE NAMEPLATE AT FIRE ALARM CONTROL RELAY ENCLOSURE STATING - "ELEVATOR SHUNT TRIP CONTROL RELAY".
4. LOCATE LIGHT ADJACENT TO OR PART OF FIRE ALARM CONTROL PANEL LABELED- "ELEVATOR BREAKER TRIPPED".
5. PROVIDE NAME PLATE AT ELEVATOR SHUNT TRIP CIRCUIT BREAKER STATING- "ELEVATOR BREAKER SHUNT TRIP CONTROLLED AT FIRE ALARM CONTROL PANEL".

9 TYPICAL ELEVATOR SHUNT TRIP WIRING DIAGRAM
E-800-C 12" = 1'-0"



10 CROSS SECTION OF HAZARDOUS LOCATION SEAL
E-800-C 3" = 1'-0"

Stantec

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Albany, NY 12203-5158
Tel: (518) 452-4358 / Fax: (518) 452-9234

www.stantec.com

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Client
ImmuCell

Lot 11 - Second Tee Business Park
1039 Riverside Street
Portland, Maine 04103

Consultants

Revision	By	Appd	DD.MM.YYYY
0 INTERIOR FIT OUT - ISSUED FOR CONSTRUCTION			08/19/2016

Issued	By	Appd	DD.MM.YYYY
PACKAGE C - INTERIOR FIT-OUT			**08.19.2016**
PACKAGE B - SUPERSTRUCTURE & SHELL			08.05.2016
PACKAGE A - FOUNDATIONS & BELOW SLAB			07.22.2016

Permit-Seal

STATE OF MAINE
Gerald Lippman Jr.
14271
LICENSED PROFESSIONAL ENGINEER
8/19/2016

Client/Project
IMMUCELL

Lot 11 - Second Tee Business Park
1039 Riverside Street
Portland, Maine 04103

Title
ELECTRICAL DETAILS

Project No. 191504176
Scale As indicated
Revision 0
Drawing No. E-800-C

RDV//RS, A1B1_NY_FA.ctb;pcp;pdf;191504176;dm_mep_immucell_191504176.rvt
8/17/2016 4:42:57 PM

ORIGINAL SHEET - ANSI E (34"x44")