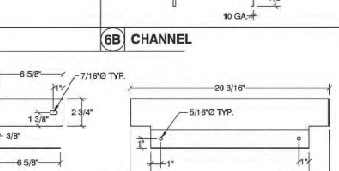
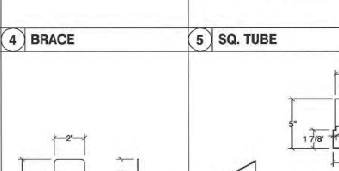
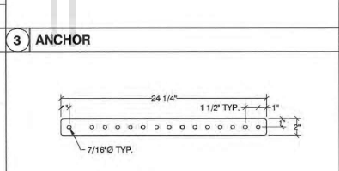
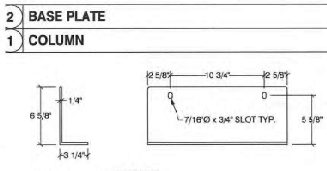


NOTES:
 1. DESIGNED PER THE 2018 IBC / 2018 CBC / 2020 IABC.
 2. STORAGE CAPACITY: 410# PER LEVEL.
 3. ANCHORS: Hilti CRK BOLT T2
 ICC-ESR-9917 W/ IABC SUPPLEMENT
 4. CONCRETE: 5" THICK x 2500 PSI
 5. SOIL BEARING PRESSURE: 400 PSF (MIN. REQ'D).
 6. EVALUATION BASED ON NORTH-RIDGE LOCATION
 (ONE OF THE HIGHEST FAULT AREAS)
 WITH THE FOLLOWING CALCULATION AS A TYPICAL EXAMPLE
 (ASSUMED GROUND FLOOR INSTALLATION)



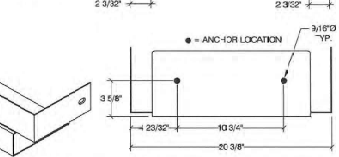
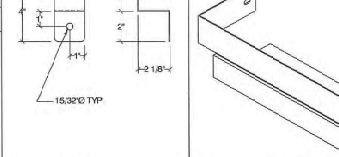
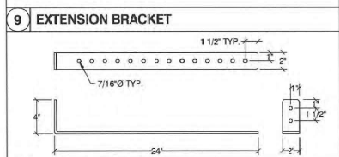
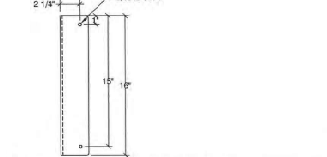
LOADS & DISTRIBUTION: CABINET
 ANALYSIS BASED ON SECTION 13.3 OF THE ASCE 7-16 SPECIFICATION
 REFERENCED IN CHAPTER 16 OF THE 2018 IBC/2018 CBC/2020 IABC

$f_p (15.3-1) = 0.4 > \rho p \times S_{ps} \times W_p / (R_p / f_p)$ 2.234 x W_p
 $f_p (15.3-2) = 1.6 > S_{ps} \times f_p \times A_{ps}$ 2.336 x W_p SHALL NOT BE GREATER THAN
 $f_p (15.3-3) = 0.3 > S_{ps} \times f_p \times A_{ps}$ 3.438 x W_p SHALL NOT BE LESS THAN

SITE CLASS = D
 Ra = 1.2
 S₁ = 1.83
 S₂ = 1.46
 f_p = 2.5
 W_p = 1
 W₁ = 20 LB
 W₂ = 430 LB

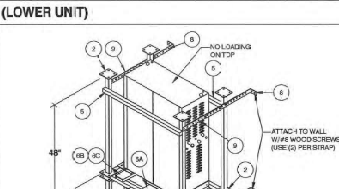
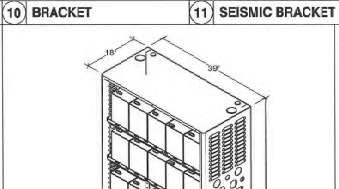
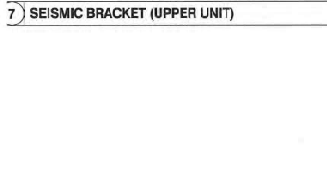
ASCE 7.16 Table 15.5-1
 ASCE 7.16 Table 15.5-1
 PER LEVEL
 PER LEVEL

$W_p = W_1 + W_2$
 $0.7f_p = 0.7 < 0.438 \times W_p = 0.32 \times (20 + 430) LB = 132 LB$



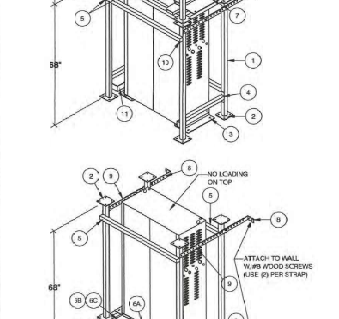
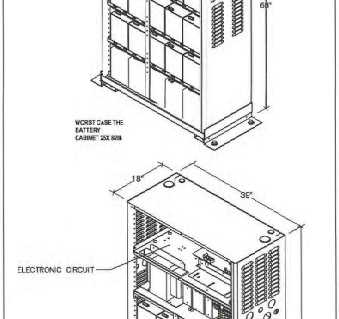
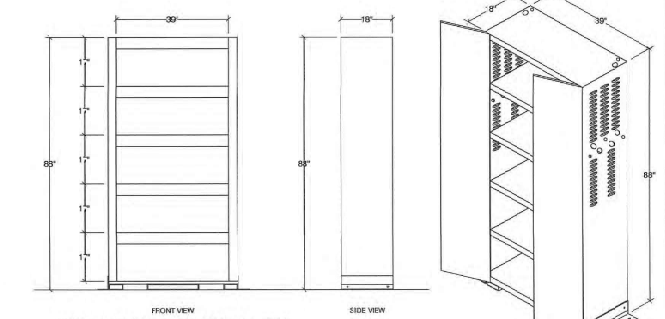
SEISMIC DISTRIBUTION:

LEVEL	h IN	WEIGHT LB	HEIGHT FT	F1 LB	Mov IN-LE
1	3.0	433	3.0	132	395
2	11.0	433	20.0	132	253.7
3	17.0	433	27.0	132	487.6
4	17.0	433	54.0	132	712.5
5	17.0	433	71.0	132	936.6
Σ	71.0	2150.0		659.0	24,390.0



DESCRIPTION

REV: DATE: DRN: DWN:



OVERLAPPING ANALYSIS: CABINET

ANCHORS SPACING, D = 14 IN
 TOP LEVEL, HEIGHT = 71 IN

FULLY LOADED:
 Total Shear = 659 LB
 Mot = 3(F₁/H)
 = 24,390 IN-LB
 Mot = 2(W₁ + W₂) * h₁ * D/2
 = (89.0 LB + 1640 LB) * 14 IN / 2
 = 12,043 IN-LB
 PuLift = (Mot * 0.6 * Max)/D
 = (24,390 - 0.6 * 12,043) / 14
 = 1,223 LB c= UPLIFT

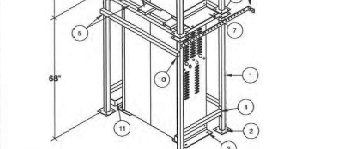
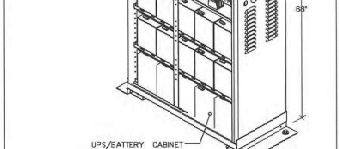
TOP SHELF - LOADED ONLY:
 Shear = 132 LB
 Mot = W_{top} * h₁
 = 132 LB * 72 IN
 = 5,304 IN-LB
 Mot = 2(W₁ + W₂) * h₁ * D/2
 = (89.0 LB + 430 LB) * 14 IN / 2
 = 5,430 IN-LB
 PuLift = (Mot * 0.6 * Max)/D
 = (5,304 - 0.6 * 5,430) / 14
 = 522 LB c= UPLIFT

ANCHORS
 ALLOWABLE CAPACITY PER ICC ESR-1307 AND ICC-ES E-1414 CHAPTER 17
 PU-LIFT: 83C LB T_{MIN} = 800 LB
 SHEAR: 300 LB T_{MIN} = 800 LB

COMBINED STRESS = ((226 LB / 1699 LB) + (659 LB / 3300 LB))
 = 0.92 < 1.2 OK

COMBINED STRESS = ((522 LB / 1660 LB) + ((132 LB / 1600 LB))
 = 0.35 < 1.2 OK

USE 1/2" x 2-3/8" MIN. EMBED. HILTI CRK-BOLT (ICC-ES E-1917) OR APPROXIMATELY EQUAL
 (1) PER BATTERY CABINET
 (2) PER BASE PLATE ON STACKED UNITS



DESCRIPTION

DRAWN BY: M.V. / T.C.
 DATE: 09/18/2020
 LAST REV. BY: M.V.
 REV. DATE: M.V.
 TYPE: M.L.T.S.
 APPROV BY: GALE PATRICK

POWER COMPANY
 1400 CALIFORNIA AVE
 NORTH RIDGE, CA 91604

DESCRIPTION

REV: DATE: DRN: DWN:

DESCRIPTION

REV: DATE: DRN: DWN:

SEIZM-C
 EST. 1965
 SEIZM-C
 ENGINEERING, INC.
 133 E. Cypress St.
 COMPTON, CA 91724
 Tel: (909) 945-9999

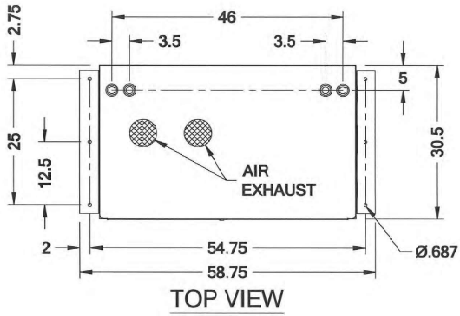
DRAWN BY: M.V. / T.C.
 DATE: 09/18/2020
 LAST REV. BY: M.V.
 REV. DATE: M.V.
 TYPE: M.L.T.S.
 APPROV BY: GALE PATRICK



CABINET ELEVATIONS **TYP. LOADING PROFILE (BATTERY)** **CABINET ELEVATIONS (STACKED UNITS)** **CALCULATIONS**

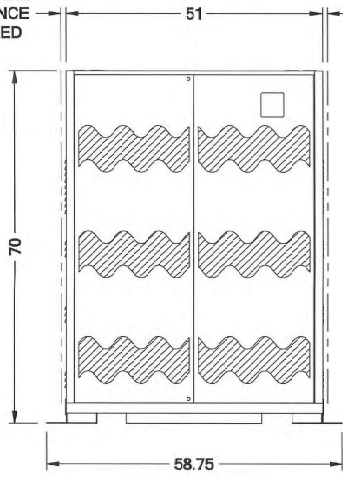
CABINET DETAILS

DRAWING NUMBER: 20-0491-A



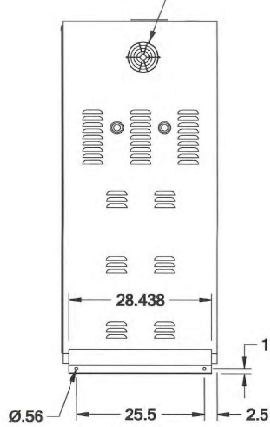
TOP VIEW

1 AIR INTAKE CLEARANCE REQUIRED

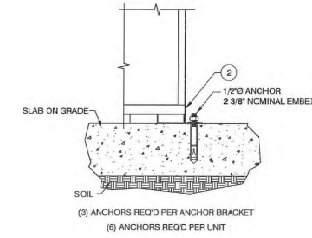
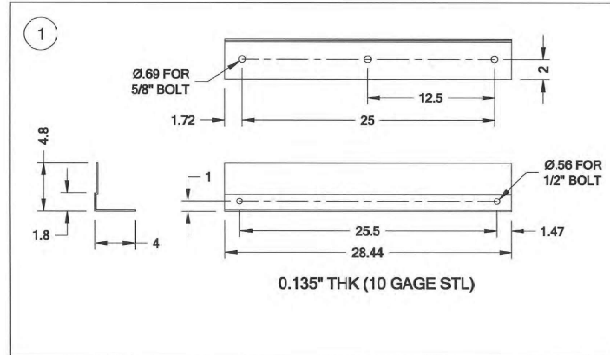
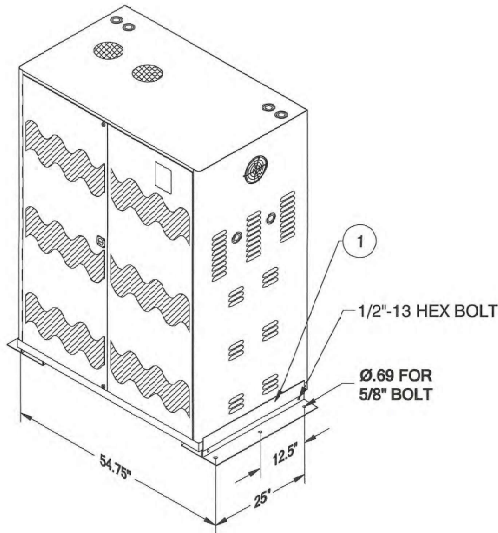


FRONT VIEW

1 AIR INTAKE CLEARANCE REQUIRED



SIDE VIEW



2 ANCHOR DETAIL

- NOTES:**
- 1. DESIGNED PER THE 2018/IBC / 2019 CBC, / 2020 LABC.
 - 2. STORAGE CAPACITY 4640 MAX. WEIGHT.
 - 3. ANCHORS: 1\"/>

LOADS & DISTRIBUTION: CABINET

ANALYSIS BASED ON SECTION 13.3 OF THE ASCE 7-16 SPECIFICATION REFERENCED IN CHAPTER 16 OF THE 2018 IBC/2019 CBC/2008 LABC

f_p (13.3-1) = $0.4 \times sp \times S_{ps} \times W_p / (R_p \times I_p)$	$0.234 \times W_p$	
f_p (13.3-2) = $1.6 \times I_{ps} \times I_p \times W_p$	$2.336 \times W_p$	SHALL NOT BE GREATER THAN
f_p (13.3-3) = $0.3 \times I_{ps} \times I_p \times W_p$	$0.338 \times W_p$	SHALL NOT BE LESS THAN

SITE CLASS = D
 $F_a = 1.2$
 $S_s = 1.50$
 $S_{ps} = 1.45$
 $I_p = 1.00$
 $R_p = 2.5$
 $sp = 1$

ASCE 7-16 Table 3.3-5.1
 ASCE 7-16 Table 3.3-5.1

$W_p = 4640 \text{ LB}$
 $0.7f_p = 0.7 \times 0.438 \times W_p = 0.31 \times 4640 \text{ LB} = 1,423 \text{ LB}$

OVERTURNING ANALYSIS:

CABINET HEIGHT, H = 70.0 IN
 ANCHORS SPACING, D = 25.0 IN

$M_{ov} = V_{ov} \times H / 2 \text{ (ft)}$
 $= 1423 \text{ LB} \times 70 \text{ IN} \times 1/2$
 $= 49,792 \text{ IN-LB}$

$M_{st} = W_p \times D / 2$
 $= 4640 \text{ LB} \times 25 \text{ IN} / 2$
 $= 58,000 \text{ IN-LB}$

$F_{up\&D} = (W_{st} - 0.5 \times M_{ov}) / D$
 $= (58,000 - 49,792) / 25 \text{ IN} = 323 \text{ LB} < 600 \text{ LB}$

ANCHORS

ALLOWABLE CAPACITY PER ICC REPORT AND ACI 318-14 CHAPTER 17
 PULLOUT = 630 LB
 SHEAR = 500 LB

$V_{allowable, ACC} = V_{allowable, ISC}$

COMBINED STRESS = $(500 \text{ LB} / 5800 \text{ LB}) + (1423 \text{ LB} / 5400 \text{ LB}) = 0.50 < 1.2 \text{ OK}$

USE 1/2\"/>

REVISION	DATE	DESCRIPTION

EST. 1989
SEIZMIC
 ENGINEERING, INC.
 130 E. Cypress St.
 Corona, California
 91724
 Tel. 951-989-9889
 Fax. 951-989-9889

DRAWN BY:	M.V./T.C.
DATE:	03/13/20
LISTED BY:	
REV. DATE:	
TYPE:	
SCALE:	
PROJECT:	