



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI PREAPPROVAL OF  
MANUFACTURER'S CERTIFICATION (OPM)**

OFFICE USE ONLY

**APPLICATION #: OPM-0112**

**HCAI Preapproval of Manufacturer's Certification (OPM)**

Type:  New  Renewal/Update

**Manufacturer Information**

Manufacturer: Chatsworth Products

Manufacturer's Technical Representative: Todd Schneider

Mailing Address: 4175 Guardian Street, Simi Valley, CA 93063

Telephone: (203) 969-4862

Email: TSchneider@chatsworth.com

**Product Information**

Product Name: Z4 SERIES CABINET SYSTEM

OPM-0112

Product Type: Computer

Product Model Number: 40U (4 sizes) and 43U (4 sizes)

General Description: Computer Data Storage – Storage Cabinet

**Applicant Information**

Applicant Company Name: EASE LLC.

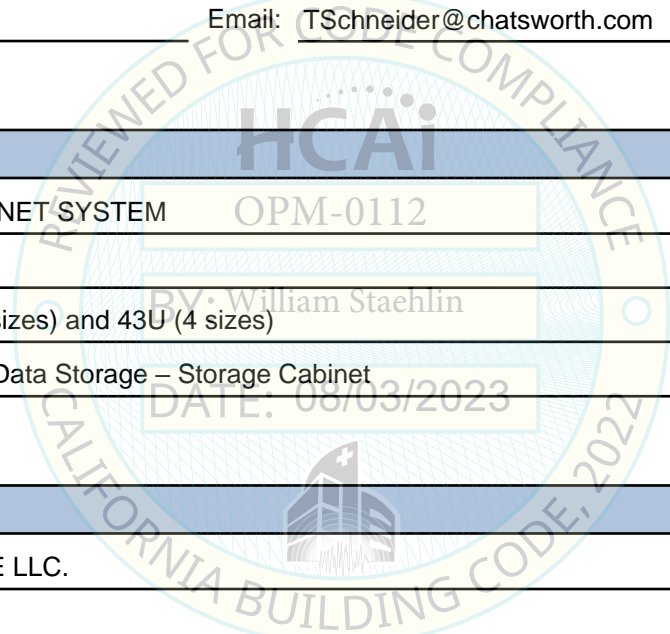
Contact Person: Tiffany Tonn

Mailing Address: 1515 FAIRVIEW AVE, STE 205, MISSOULA, MT 59801

Telephone: (406) 541-3273

Email: tiffany@easeco.com

Title: Office Manager



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**STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY**





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

**Registered Design Professional Preparing Engineering Recommendations**

Company Name: EASE LLC  
Name: Jonathan Roberson California License Number: S4197  
Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709  
Telephone: (951) 295-1892 Email: jon@EASECo.com

**HCAI Special Seismic Certification Preapproval (OSP)**

Special Seismic Certification is preapproved under OSP OSP Number: \_\_\_\_\_

**Certification Method**

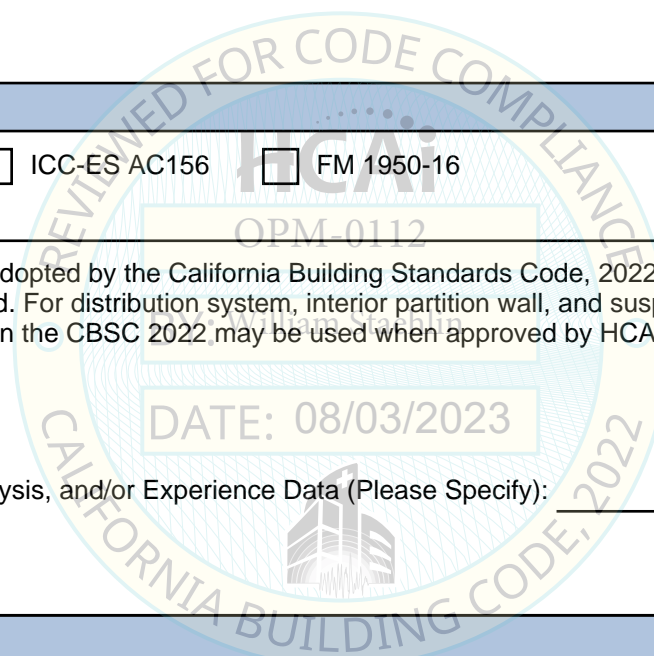
Testing in accordance with:  ICC-ES AC156  FM 1950-16  
 Other(s) (Please Specify): \_\_\_\_\_

\*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2022 may be used when approved by HCAI prior to testing.

Analysis  
 Experience Data  
 Combination of Testing, Analysis, and/or Experience Data (Please Specify): \_\_\_\_\_

**HCAI Approval**

Date: 8/3/2023  
Name: William Staehlin Title: Senior Structural Engineer  
Condition of Approval (if applicable): \_\_\_\_\_



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**STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY**





**EQUIPMENT ANCHORAGE  
& SEISMIC ENGINEERING**

5877 Pine Ave, Ste. 210  
Chino Hills, CA. 91709  
Phn: (909) 606-7622

The Department of Health Care Access and Information  
**PREAPPROVAL OF MANUFACTURER'S CERTIFICATION**  
**OPM-0112**

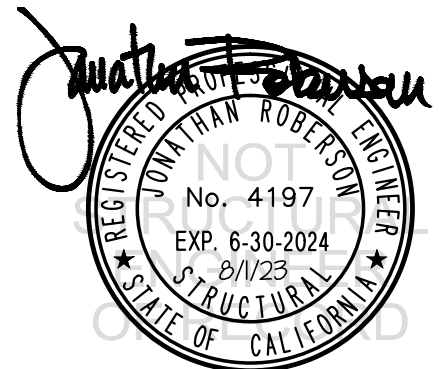
**THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE**

MANUFACTURER: **CHATSWORTH PRODUCTS, INC.**  
EQUIPMENT NAME: **Z4-Series SeismicFrame Cabinet System**

Sheet: 1 of 9  
Date: 8/1/23

**GENERAL NOTES**

1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2022 CBC
2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
3. THIS PREAPPROVAL CONFORMS TO THE 2022 CALIFORNIA BUILDING CODE WHERE  $S_{ds}$  IS NOT GREATER THAN 1.70 & 2.30. SEE DETAIL FOR APPLICABILITY
4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3,  
WHERE  $S_{ds} = 1.70$ ,  $a_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 6.0$ ,  $z/h = 0$  AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR  $\Omega$ .  
WHERE  $S_{ds} = 2.30$ ,  $a_p = 2.5$ ,  $I_p = 1.5$ ,  $R_p = 6.0$ ,  $z/h = 0$  AT CONCRETE SLAB,  $z/h < 1$  AT CONCRETE SLAB ON METAL DECK.  
SEE FOLLOWING SHEETS FOR  $\Omega$ .
5. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
7. CONCRETE SLAB ON METAL DECK DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION IN THE BUILDING. (i.e.  $z/h \leq 1$ )
8. CONCRETE SLAB DETAIL VALID FOR DEMANDS SHOWN AT OR BELOW GRADE. (i.e.  $z/h = 0$ )
9. **RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING**
  - A. PROVIDE SUPPORTING STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
  - B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.
  - C. VERIFY THAT PROJECT SPECIFIC VALUES OF  $S_{ds}$  &  $z/h$  RESULT IN SEISMIC FORCES ( $E_h$ ,  $E_v$ ) THAT DO NOT EXCEED THE VALUES ON THE DETAILS.
  - D. VERIFY THAT THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE ICC ESR REPORT. AND THIS OPM.
  - E. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS (SEE TYPICAL DETAIL ON SHEET 2).
  - F. VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR  $6h_{ef}$  FROM THIS UNIT'S ANCHORS.



### CHATSWORTH PRODUCTS, INC.

DES. **J. ROBERSON**

SHEET

JOB NO. **11-2314**

**2**

DATE **8/1/23**

OF **9** SHEETS

### Z4-Series SeismicFrame Cabinet System

**10. EXPANSION ANCHORS:**

A. ATTACHMENT IS TO BE MADE WITH THE ANCHORS LISTED BELOW AND INSTALLED AS DESCRIBED IN THE CORRESPONDING ICC REPORT.

Anchor Diameter	Concrete Type	Min. f'c (psi)	Anchor Type	ICC Report No.	Min. Embed.	Min. Spacing	Min. Edge Dist.	Min. Conc. Thickness	Torque Test	Direct Tension Test
3/8"	Sand Light Weight	3000	Hilti Kwik Bolt TZ2 (CARBON STEEL)	ESR-4266	2"	6.75"	12"	See Detail "A"	30 FT-LB	N/A
M12	Normal Weight	3000	Hilti HSL-4 (CARBON STEEL)	ESR-4386	3.15"	12"	36"	6"	60 FT-LB	4478 lb
3/4"	Normal Weight	3000	Hilti HIT-HY 200 V3 (CARBON STEEL)	ESR-4868	6"	12"	51"	8"	N/A	6948 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, (SEE SCHEDULE) AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY EMPLOYED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5 AND CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR OF RECORD, OWNER AND THE ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE.

(i) AFTER AT LEAST 24 HOURS HAVE ELAPSED SINCE INSTALLATION, DIRECT PULL TENSION TEST OR TORQUE TEST AT LEAST 50% OF THE ANCHORS.

(ii) ACCEPTANCE CRITERIA:

- DIRECT TENSION TEST: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER BECOMES LOOSE.
- TORQUE TEST: THE APPLICABLE TORQUE MUST BE ACHIEVED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE : 1/2 TURN OF THE NUT

(iii) IF ANY ANCHOR FAILS, TEST ALL ANCHORS.

D. AVOID DAMAGING EXISTING STEEL REINFORCING IN CONCRETE SLAB WHEN INSTALLING CONCRETE EXPANSION ANCHORS.

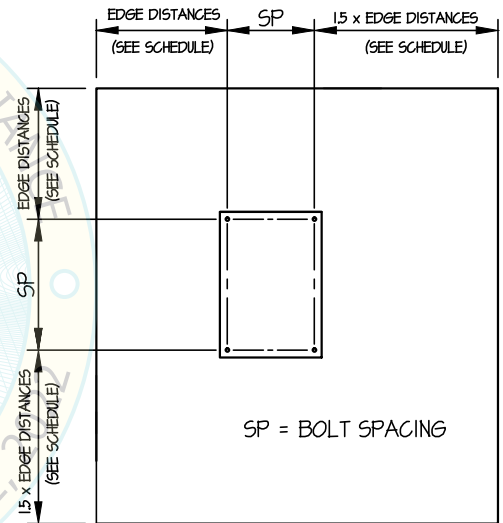
E. PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT & WASHER.

**11. BOLTS THROUGH CONCRETE ON METAL DECK**

A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNLESS OTHERWISE NOTED.

B. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16) FOR CONCRETE.

C. THROUGH-BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TENSION TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



TYPICAL CONCRETE EDGE DETAIL (SLAB ON GRADE ONLY)



## CHATSWORTH PRODUCTS, INC.

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SHEET

**3**

JOB NO. **11-2314**

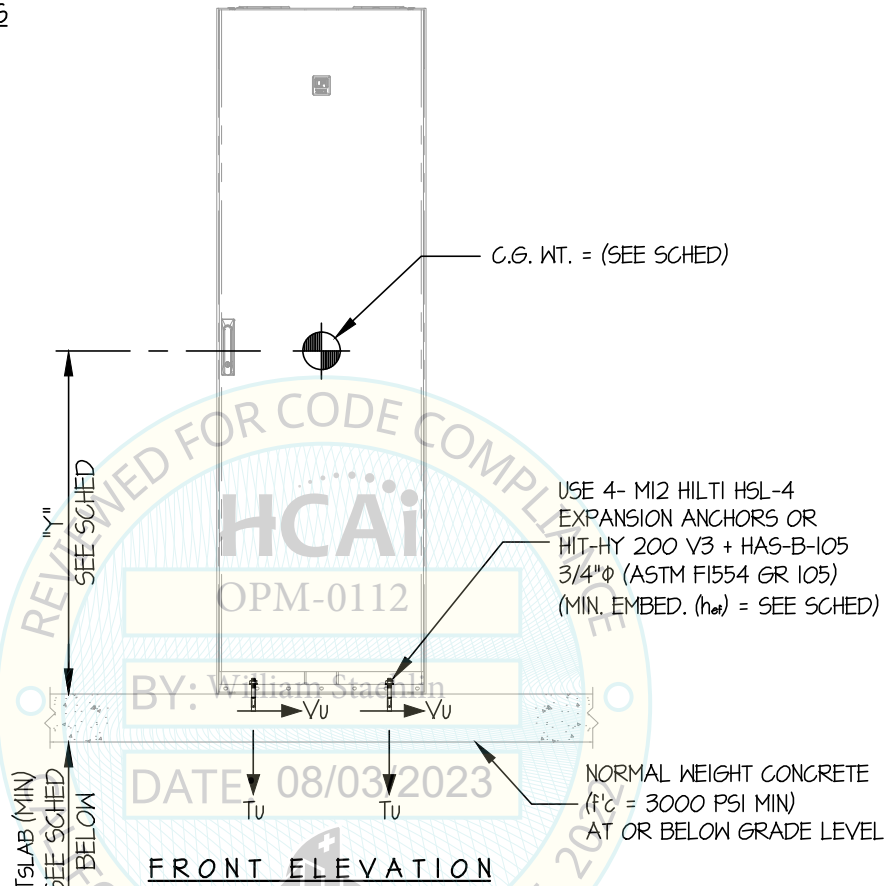
DATE **8/1/23**

OF **9** SHEETS

## Z4-Series SeismicFrame Cabinet System

SEISMIC SUPPORTS & ATTACHMENTS

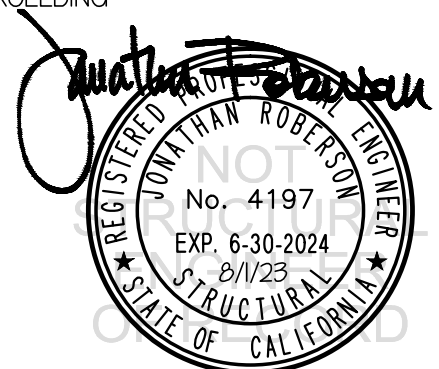
CONCRETE SLAB



ANCHORS					
MAX Sds	TYPE	DIAM	EFF EMBED	QTY	TSLAB
170	HILTI HSL-4	M12	3.15"	4	6"
230	HILTI HSL-4	M12	3.15"	4	6"
230	HILTI HIT-HY 200 V3	3/4"	6"	4	8"

**NOTES:**

- FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. (EXAMPLE:  $\alpha_p = 2.5$ ,  $\beta_p = 1.5$ ,  $R_p = 6.0$ ,  $\Omega_o = 2.0$ ,  $z/h = 0$ )
- THIS CALCULATION ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
- THIS CALCULATION WAS PREPARED WITHOUT KNOWLEDGE OF ANY SITE CONDITION. COMPATIBILITY FOR USE WITH A SITE SHALL BE EVALUATED BY THE STRUCTURAL ENGINEER OF RECORD OF THE INSTALLATION (SEOR). USE REQUIRES APPROVAL BY THE SEOR.
- STRUCTURAL ENGINEER OF RECORD FOR THE INSTALLATION SHALL VERIFY ALL CONDITIONS, EVALUATE INTERACTION WITH ADJACENT EQUIPMENT AND ANCHORS, AND PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- SEE GENERAL NOTES: SHEETS 1 AND 2.



### CHATSWORTH PRODUCTS, INC.

DES. J. ROBERSON

SHEET

# 4

JOB NO. 11-2314

DATE 8/1/23

OF 9 SHEETS

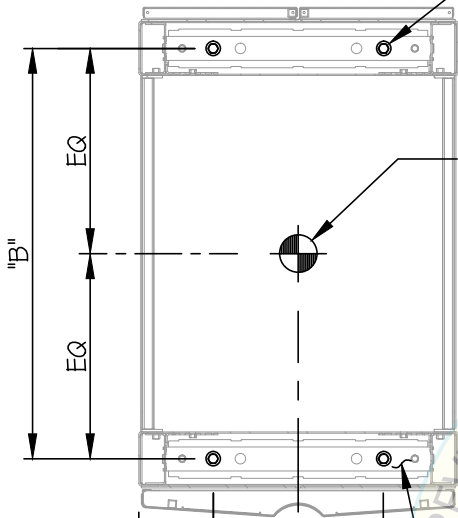
## Z4-Series SeismicFrame Cabinet System

SEISMIC SUPPORTS & ATTACHMENTS

S<sub>DS</sub> ≤ 1.70

CONCRETE SLAB

USE 4- M12 HILTI HSL-4  
EXPANSION ANCHORS  
(MIN. EMBED. (h<sub>req</sub>) = 3.15")



C.G. WT. = SEE SCHED  
(Y = SEE SCHED)

UNIT NUMBER	RACK WEIGHT (lb.)	TOTAL WEIGHT ** (lb.)	"Y" (in.)	"A" (in.)	"B" (in.)	+ T <sub>u</sub> (lb.)	+ V <sub>u</sub> (lb.)
40Ux600x1050	446	2046	33.76	12.6	37.1	3060	1017
40Ux600x1200	472	2072	33.76	12.6	43	3040	1030
* 43Ux600x1050	466	2066	34.67	12.6	37.1	3181	1027
43Ux600x1200	493	2093	34.67	12.6	43	3161	1041

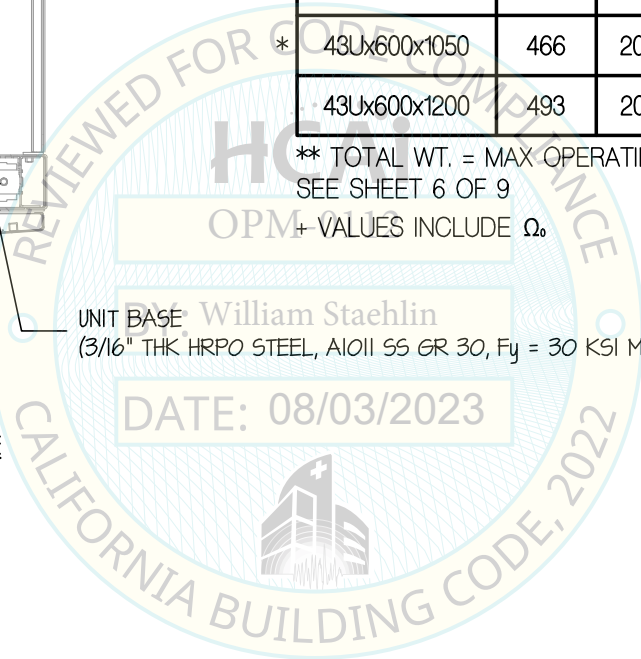
\*\* TOTAL WT. = MAX OPERATING WT = RACK WT + CONTENT WT  
SEE SHEET 6 OF 9

+ VALUES INCLUDE Ω

UNIT BASE William Staehlin  
(3/16" THK HRPO STEEL, A1011 SS GR 30, F<sub>y</sub> = 30 KSI MIN)

DATE: 08/03/2023

PLAN AT BASE



## CHATSWORTH PRODUCTS, INC.

DES. **J. ROBERSON**

SHEET

**5**

JOB NO. **11-2314**

DATE **8/1/23**

OF **9** SHEETS

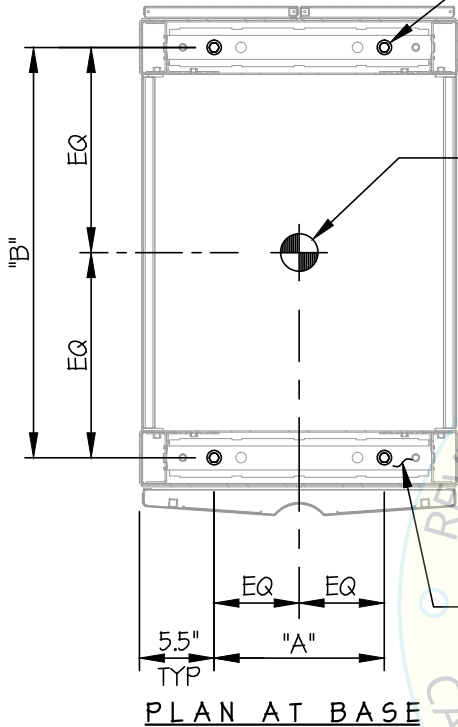
## Z4-Series SeismicFrame Cabinet System

**SEISMIC SUPPORTS & ATTACHMENTS**

**SDS 2.30**

**CONCRETE SLAB**

USE 4- M12 HILTI HSL-4  
EXPANSION ANCHORS  
(MIN. EMBED. (h<sub>ef</sub>) = 3.15")



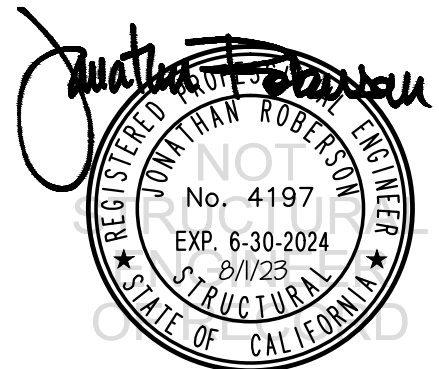
C.G. WT. = SEE SCHED  
(Y = SEE SCHED)

UNIT NUMBER	RACK WEIGHT (lb.)	TOTAL WEIGHT ** (lb.)	"Y" (in.)	"A" (in.)	"B" (in.)	+ T <sub>u</sub> (lb.)	+ V <sub>u</sub> (lb.)
40Ux800x1050	512	2112	33.76	20.5	37.1	3203	1421
40Ux800x1200	539	2139	33.76	20.5	43	3161	1439
* 43Ux800x1050	535	2135	34.67	20.5	37.1	3331	1436
43Ux800x1200	563	2163	34.67	20.5	43	3289	1455

\*\* TOTAL WT. = MAX OPERATING WT = RACK WT + CONTENT WT  
+ VALUES INCLUDE Ω<sub>o</sub>

William Staehlin  
(3/16" THK HRPO STEEL, A1011 SS GR 30, F<sub>y</sub> = 30 KSI MIN)

DATE: 08/03/2023



## CHATSWORTH PRODUCTS, INC.

DES. **J. ROBERSON**

SHEET

**6**

JOB NO. **11-2314**

DATE **8/1/23**

OF **9** SHEETS

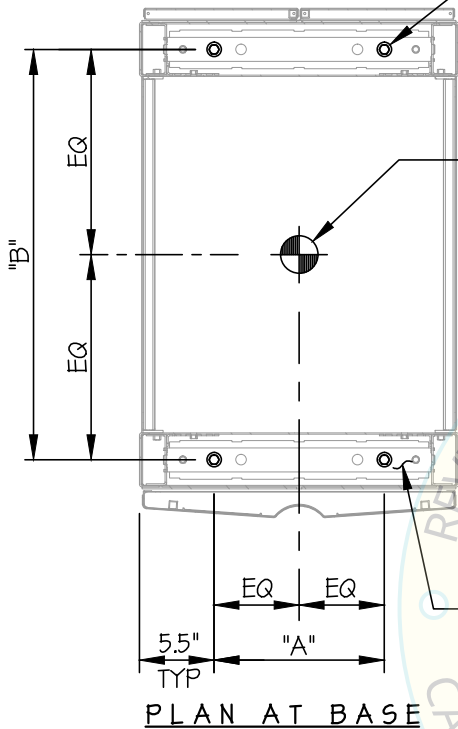
## Z4-Series SeismicFrame Cabinet System

**SEISMIC SUPPORTS & ATTACHMENTS**

**Spec 230**

**CONCRETE SLAB**

USE 4- HIT-HY 200 V3 + HAS-B-105  
3/4"φ (ASTM F1554 GR 105)  
(MIN. EMBED. (h<sub>dev</sub>) = 6")



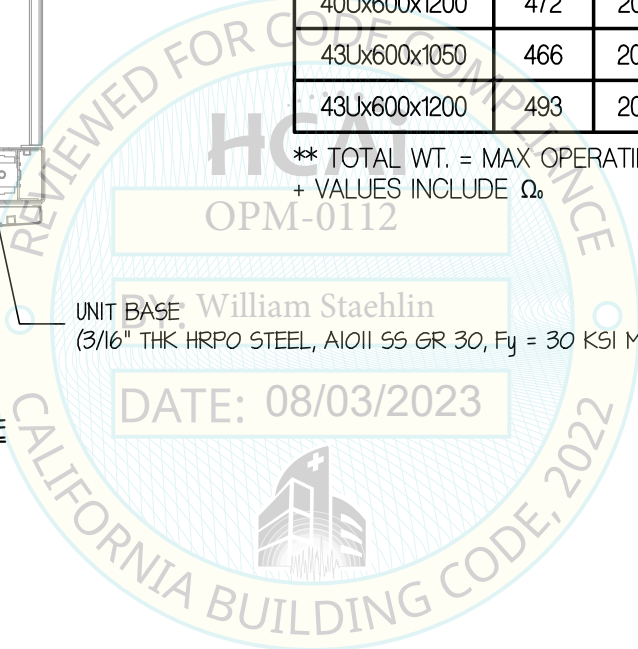
C.G. WT. = SEE SCHED  
(Y = SEE SCHED)

UNIT NUMBER	RACK WEIGHT (lb.)	TOTAL WEIGHT ** (lb.)	"Y" (in.)	"A" (in.)	"B" (in.)	+ Tu (lb.)	+ Vu (lb.)
40Ux600x1050	446	2046	33.76	12.6	37.1	4303	1376
40Ux600x1200	472	2072	33.76	12.6	43	4277	1394
43Ux600x1050	466	2066	34.67	12.6	37.1	4468	1390
43Ux600x1200	493	2093	34.67	12.6	43	4443	1408

\*\* TOTAL WT. = MAX OPERATING WT = RACK WT + CONTENT WT  
+ VALUES INCLUDE Ω<sub>o</sub>

UNIT BASE William Staehlin  
(3/16" THK HRPO STEEL, A1011 SS GR 30, F<sub>y</sub> = 30 KSI MIN)

DATE: 08/03/2023



*Jonathan Roberson*  
REGISTERED PROFESSIONAL ENGINEER  
No. 4197  
EXP. 6-30-2024  
8/1/23  
STRUCTURAL  
STATE OF CALIFORNIA



## CHATSWORTH PRODUCTS, INC.

DES. **J. ROBERSON**

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JOB NO. **11-2314**

**7**

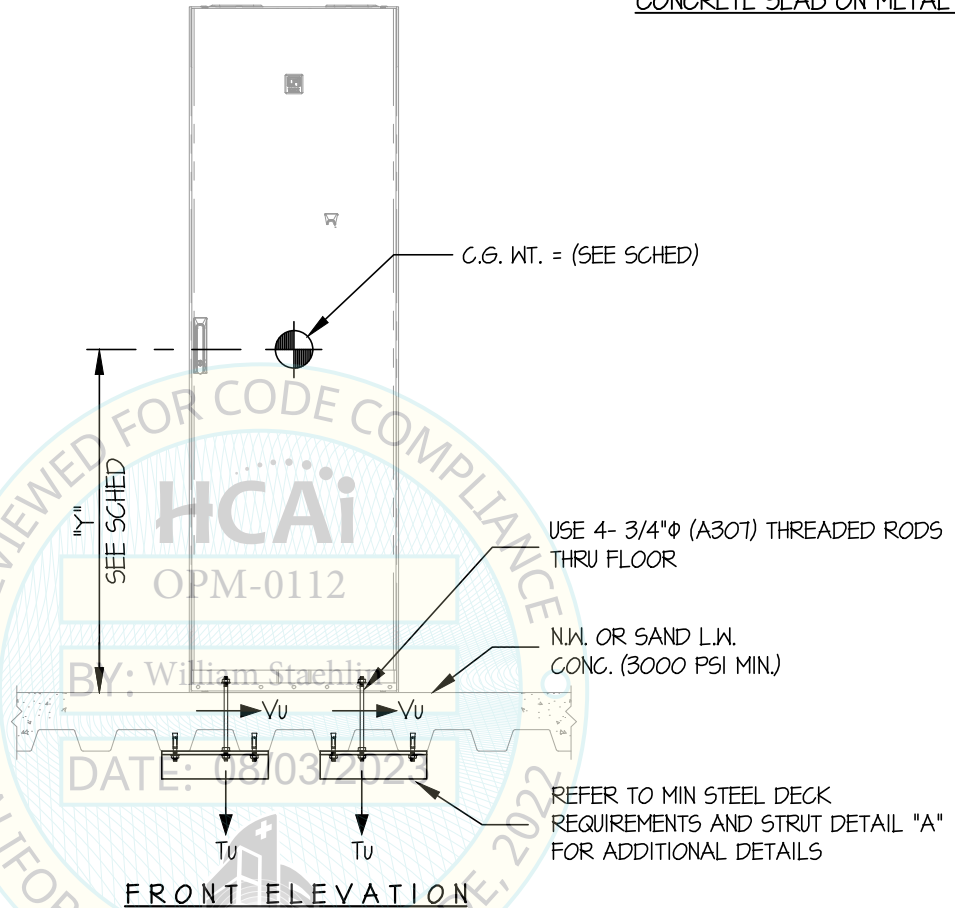
DATE **8/1/23**

OF **9** SHEETS

## Z4-Series SeismicFrame Cabinet System

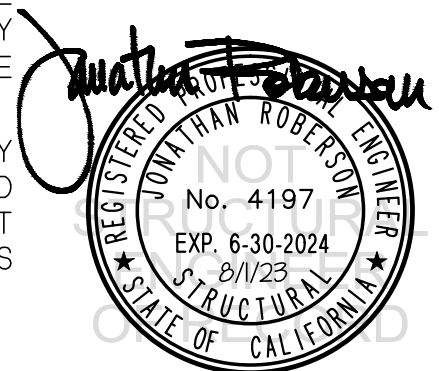
SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



**NOTES:**

- FORCES ARE DETERMINED PER 2022 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. (EXAMPLE:  $S_{bs} = 2.30$ ,  $a_p = 2.5$ ,  $l_p = 1.5$ ,  $R_p = 6.0$ ,  $\Omega_o = 2.0$ ,  $z/h \leq 1$ )
  - HORIZONTAL FORCE ( $E_h$ ) =  $1.73 W_p$
  - HORIZONTAL FORCE ( $E_{mh}$ ) =  $3.46 W_p$  (FOR CONCRETE ANCHORAGE)
  - VERTICAL FORCE ( $E_v$ ) =  $0.46 W_p$
- THIS CALCULATION ENCOMPASSES WEIGHTS AND VERTICAL C.G. POSITIONS NOT EXCEEDING VALUES SHOWN.
- THIS CALCULATION WAS PREPARED WITHOUT KNOWLEDGE OF ANY SITE CONDITION. COMPATIBILITY FOR USE WITH A SITE SHALL BE EVALUATED BY THE STRUCTURAL ENGINEER OF RECORD OF THE INSTALLATION (SEOR). USE REQUIRES APPROVAL BY THE SEOR.
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- SEE GENERAL NOTES: SHEETS 1 AND 2.



### CHATSWORTH PRODUCTS, INC.

DES. **J. ROBERSON**

SHEET

JOB NO. **11-2314**

**8**

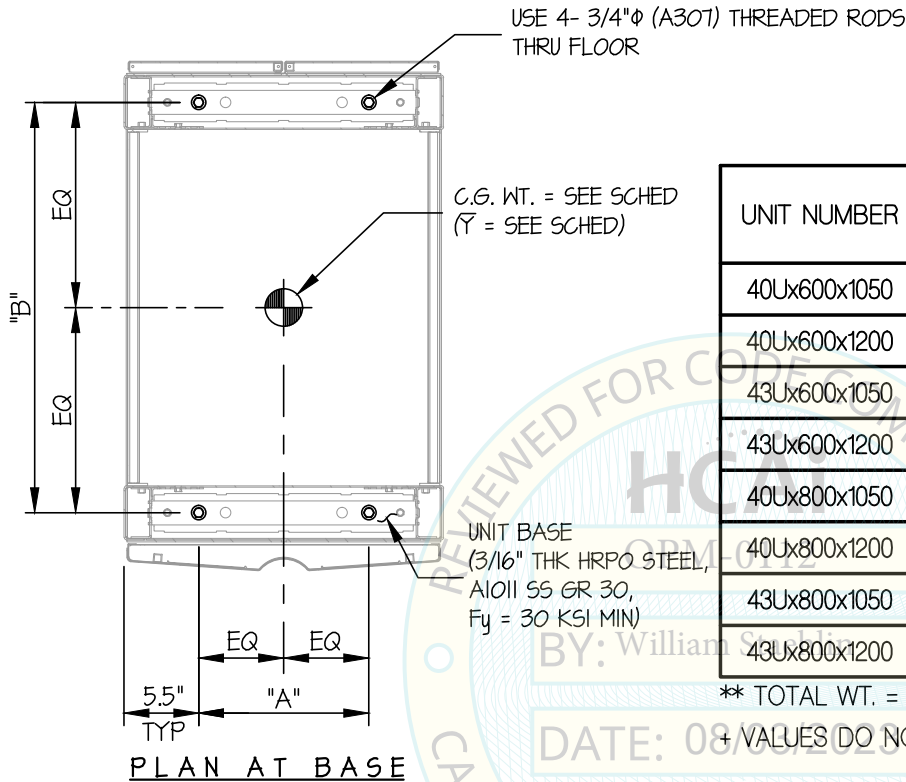
DATE **8/1/23**

OF **9** SHEETS

### Z4-Series SeismicFrame Cabinet System

SEISMIC SUPPORTS & ATTACHMENTS

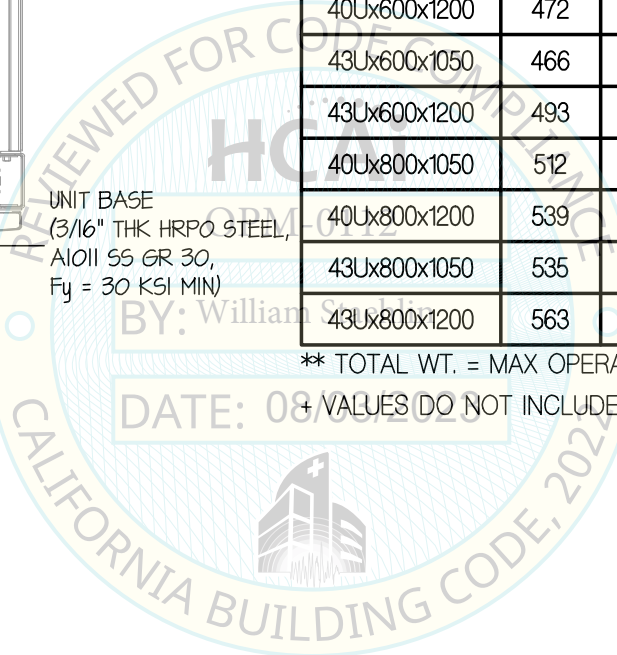
CONCRETE SLAB ON METAL DECK



UNIT NUMBER	RACK WEIGHT (lb.)	TOTAL WEIGHT ** (lb.)	"Y" (in.)	"A" (in.)	"B" (in.)	+ Tu (lb.)	+ Vu (lb.)
40Ux600x1050	446	2046	33.76	12.6	37.1	3559	1151
40Ux600x1200	472	2072	33.76	12.6	43	3537	1165
43Ux600x1050	466	2066	34.67	12.6	37.1	3697	1162
43Ux600x1200	493	2093	34.67	12.6	43	3676	1177
40Ux800x1050	512	2112	33.76	20.5	37.1	2639	1188
40Ux800x1200	539	2139	33.76	20.5	43	2603	1203
43Ux800x1050	535	2135	34.67	20.5	37.1	2745	1201
43Ux800x1200	563	2163	34.67	20.5	43	2710	1216

\*\* TOTAL WT. = MAX OPERATING WT = RACK WT + CONTENT WT

+ VALUES DO NOT INCLUDE Ω.



*Jonathan Roberson*

REGISTERED PROFESSIONAL ENGINEER  
 JONATHAN ROBERSON  
 No. 4197  
 EXP. 6-30-2024  
 8/1/23  
 STRUCTURAL  
 STATE OF CALIFORNIA

## CHATSWORTH PRODUCTS, INC.

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**9**

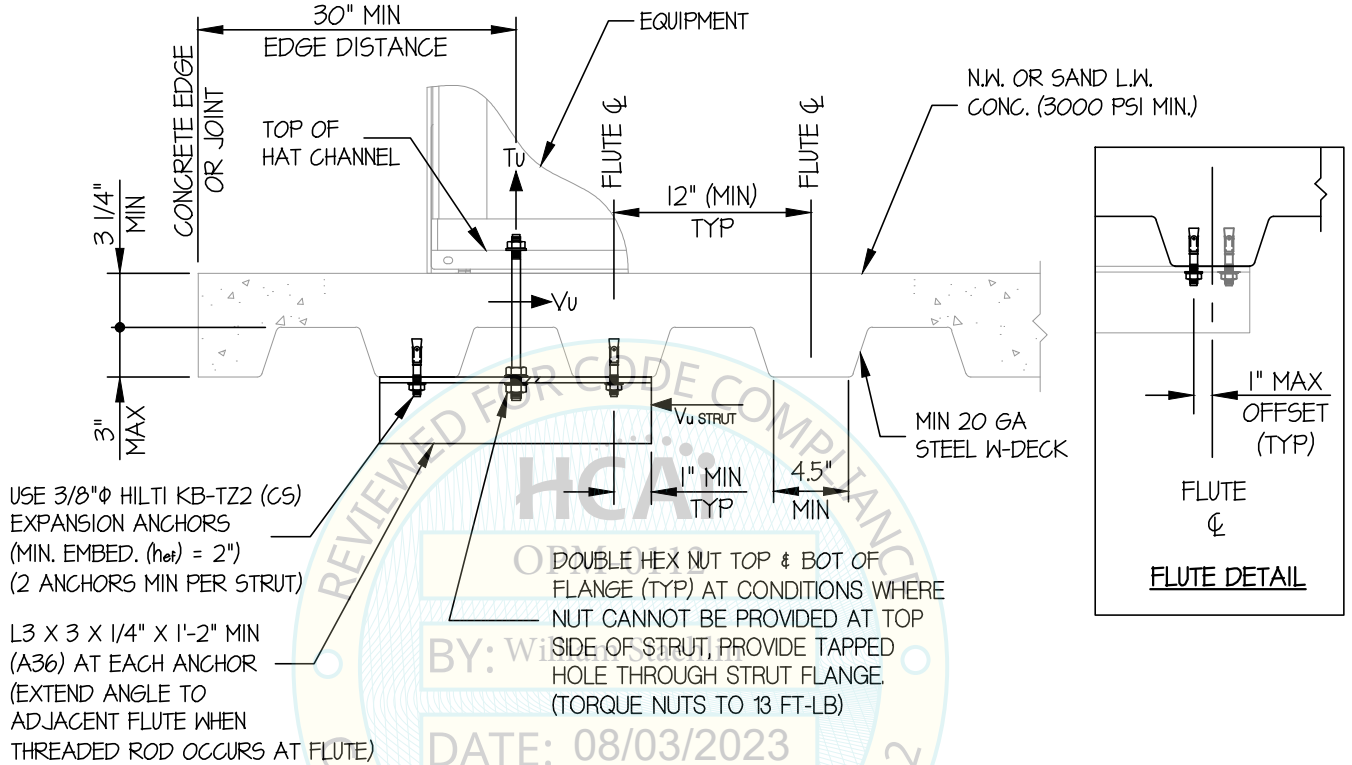
DATE **8/1/23**

OF **9** SHEETS

### Z4-Series SeismicFrame Cabinet System

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE DETAIL



MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (A)

