APPLICATION FOR OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY
APPLICATION #: OPM-0073-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: Steris Corporation

Manufacturer's Technical Representative: Zachary Miday

Mailing Address: 5960 Heisley Rd. Mentor, OH. 44060

Telephone: (440) 392-7688 Email: Zachary_Miday@steris.com

Product Information

Product Name: Amsco 26 x 37.5 Steam Sterilizer

Product Type: Steam Sterilizer (Process Type)

Product Model Number: Amsco 26 x 37.5 Steam Sterilizer

General Description: Floor Mounted Sterilizer

Applicant Information

Applicant Company Name: **EASE Co.**

Contact Person: Jonathan Roberson, S.E.

Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA. 91709

Telephone: (909) 606-7622 Email: J.Roberson@EASECo.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: _____ Date: 5/22/15

Title: Principal Engineer Company Name: **EASE Co.**

REVIEWED FOR CODE COMPLIANCE
OSHPD
OPM-0073-13
BY: William Staehlin
DATE: 07/22/2015
CALIFORNIA BUILDING CODE, 2013

Registered Design Professional Preparing Engineering Recommendations

Company Name: EASE Co.

Name: Jonathan Roberson, S.E. California License Number: S4197

Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA. 91709

Telephone: 909-606-7667 Email: J.Roberson@EASECo.com

OSHPD Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)

☒ Special Seismic Certification is not preapproved

Certification Method(s)

☐ Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-10

☐ Other* (Please Specify):

*Use of test criteria other than those adopted by the California Building Standards Code, 2013 (CBSC 2013) 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 2013 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

List of Attachments Supporting the Manufacturer's Certification

☐ Test Report ☒ Drawings ☒ Calculations ☐ Manufacturer's Catalog

☐ Other(s) (Please Specify):

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2013 ONLY

Signature: Date: 07-22-2015

Print Name: William Staehlin

Title: SSE

Condition of Approval (if applicable):

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oshpd
BY: William Staehlin
DATE: 07/22/2015

EASE
EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING

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

Office of Statewide Health Planning and Development

PREAPPROVAL OF MANUFACTURER'S CERTIFICATION

OPM-0073-13

THIS PREAPPROVAL CONFORMS TO THE 2013 CALIFORNIA BUILDING CODE

MANUFACTURER: **STERIS CORPORATION** Sheet: 1 of 13

EQUIPMENT NAME: **AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5** Date: 6/15/15

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2013 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2013 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 2013 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 1.50, 1.70, 2.00, 2.20; SEE SPECIFIC DETAILS FOR APPLICABILTY.
4. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE

   S_{DS} = 1.50, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_0

   S_{DS} = 1.70, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_0

   S_{DS} = 2.20, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_0

   S_{DS} = 2.00, a_p = 1.0, I_p = 1.5, R_p = 1.5, z/h = 0 AT CONCRETE SLAB & z/h $\leq$ 1 AT CONCRETE SLAB ON METAL DECK. SEE FOLLOWING SHEETS FOR Ω_0
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 ON GRADE DETAIL VALID FOR DEMANDS SHOWN AT ANY ELEVATION 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 2013 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.
   - 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 6hef FROM THIS UNIT'S ANCHORS.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
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6/15/15
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oshpd
BY: William Staehlin
DATE: 07/22/2015
CALIFORNIA BUILDING CODE 2013
NOT STRUCTURAL ENGINEER OF RECORD

STERIS CORPORATION

AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5

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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
1/2"	Sand Light Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	2"	-	-	See Sheet 13 of 13	40 FT-LB	1186 lb
3/8"	Sand Light Wt or Hardrock	3000	Simpson Strong Bolt 2	ESR-3037	1-5/8"	8"	12"	3-1/4"	30 FT-LB	521 lb
3/4"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	3-3/4"	15"	27"	6"	110 FT-LB	4120 lb
3/4"	Normal Weight	3000	Hilti Kwik Bolt TZ	ESR-1917	4-3/4"	15"	27"	8"	110 FT-LB	5874 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 12" OR 27" (SEE SCHEDULE) AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

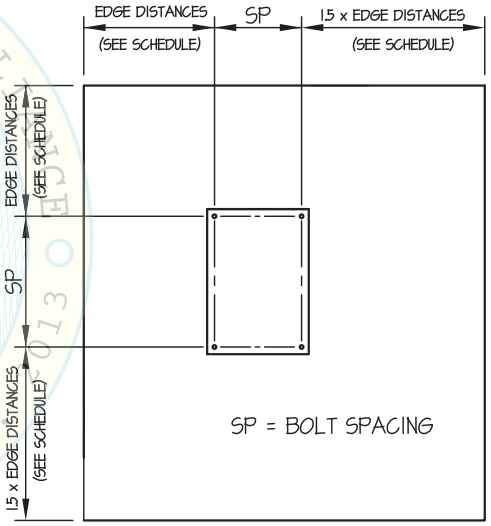
C. TESTING OF EXPANSION ANCHORS PER 2013 CBC, 1913A.7: TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD

(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.



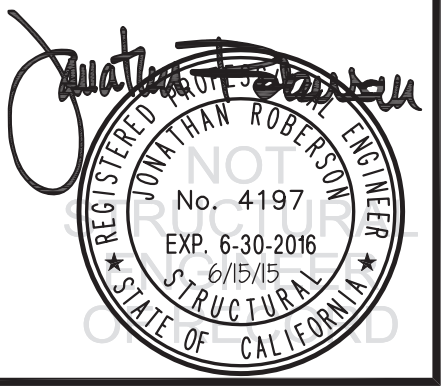
TYPICAL CONCRETE EDGE DETAIL

11. BOLTS THROUGH CONCRETE ON METAL DECK

A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TENSION TESTING) 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 (THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRMCONTACT) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.



OPM-0073-13 Reviewed for Code Compliance by William Staehlin DATE: 07/22/2015 CALIFORNIA BUILDING CODE 2013
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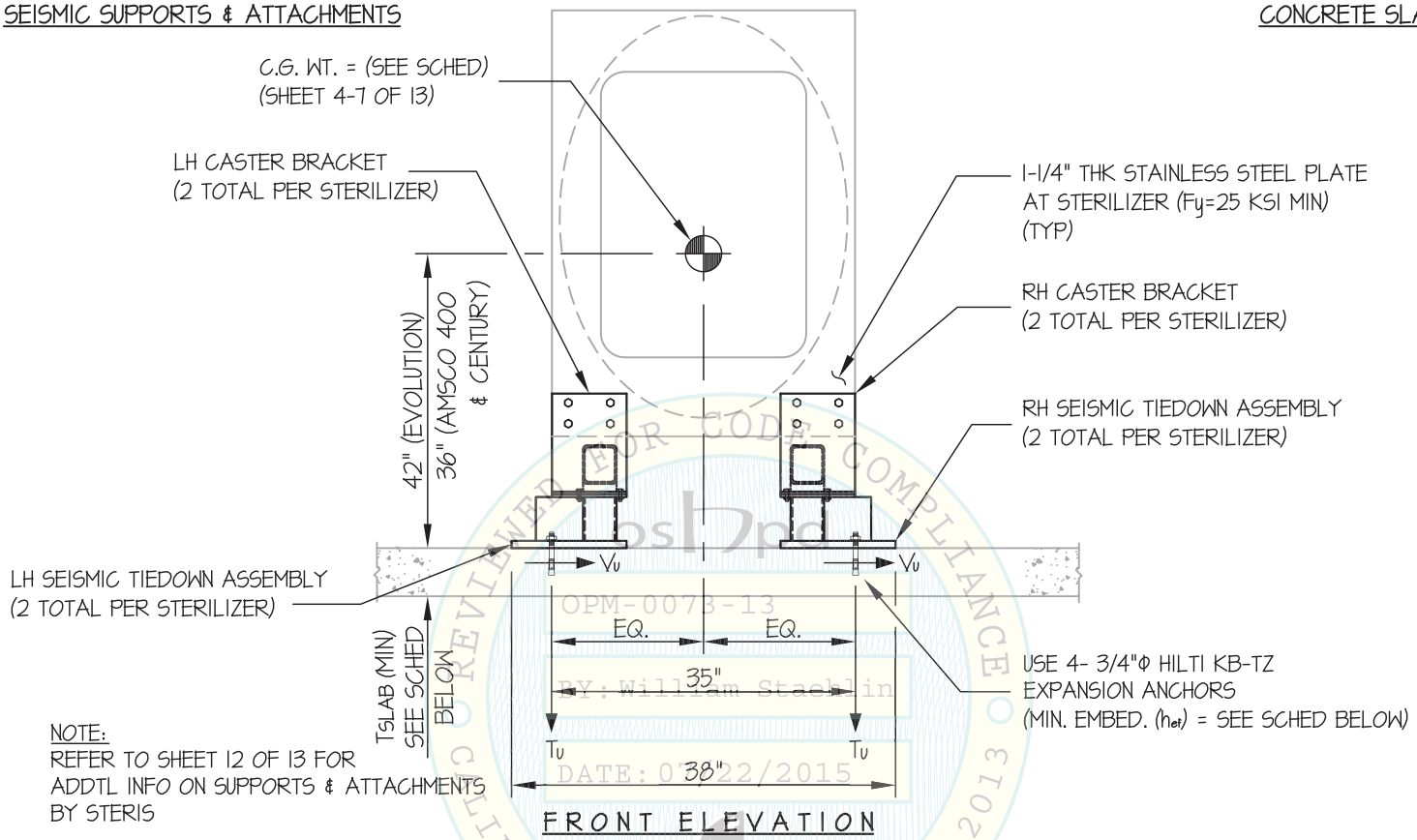
AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5

DES. J. ROBERSON
JOB NO. 14-1501
DATE 6/15/15
SHEET 3 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



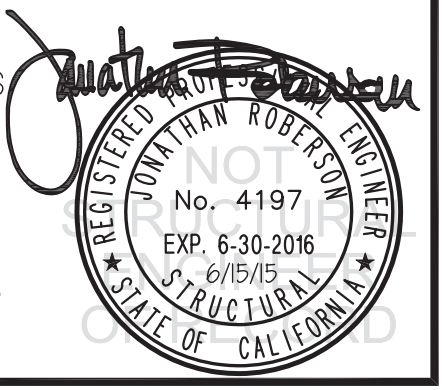
FRONT ELEVATION

NOTE:
REFER TO SHEET 12 OF 13 FOR ADDTL INFO ON SUPPORTS & ATTACHMENTS BY STERIS

	ANCHORS					
MAX S_{DS}	TYPE	DIAM	EFF EMBED	QTY	T_{SLAB}	MODEL
1.50	HILTI KB-TZ	3/4"	3.75"	4	6"	AMSCO 400 & CENTURY
1.70	HILTI KB-TZ	3/4"	3.75"	4	6"	EVOLUTION
2.00	HILTI KB-TZ	3/4"	4.75"	4	8"	AMSCO 400 & CENTURY
2.20	HILTI KB-TZ	3/4"	4.75"	4	8"	EVOLUTION

NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10 STRENGTH DESIGN IS USED. (a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, z/h = 0)
2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
4. SEE GENERAL NOTES: SHEET 1 AND 2



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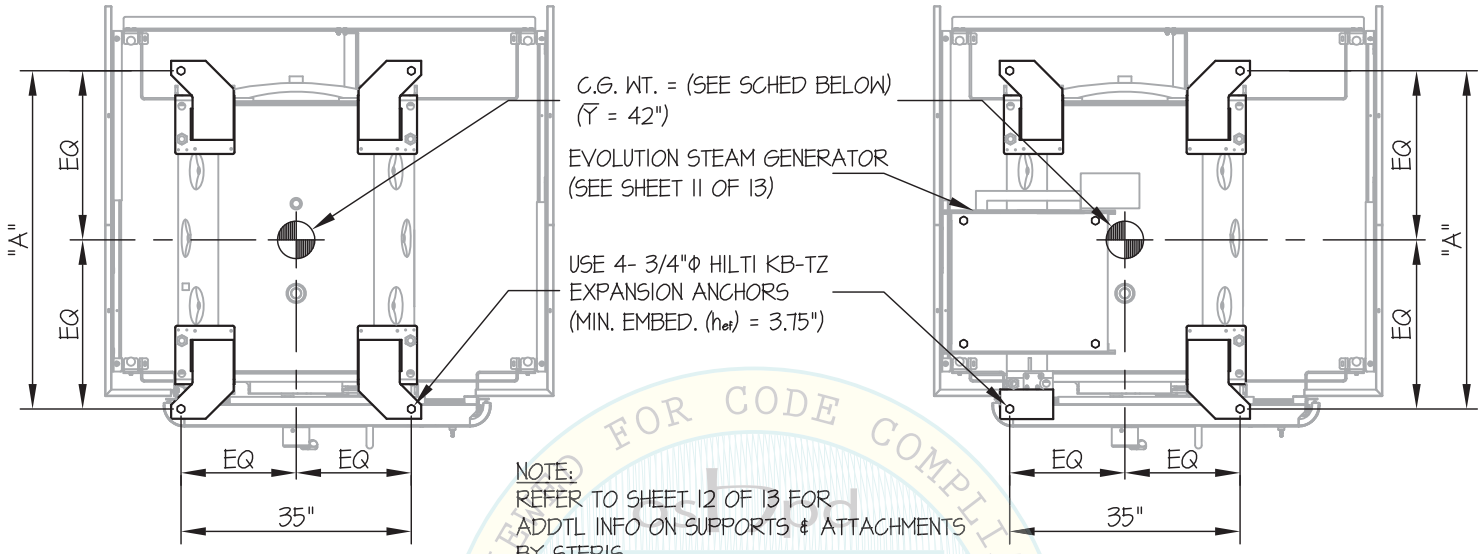
SHEET 4 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 1.70$, $z/h = 0$ — CONCRETE SLAB



PLAN AT BASE
(STANDARD SEISMIC BASE)

NOTE:
REFER TO SHEET 12 OF 13 FOR ADDTL INFO ON SUPPORTS & ATTACHMENTS BY STERIS

PLAN AT BASE
(STEAM GENERATOR SEISMIC BASE)

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "A" (IN.)	** T_u (LB/BOLT)	** V_u (LB/BOLT)
EVOLUTION 42 SD	65 X 91.25 X 77.25	3800	51.375	2626	1093
EVOLUTION 54 SD	77 X 91.25 X 77.25	4200	63.375	2790	1208
EVOLUTION 66 SD	89 X 91.25 X 77.25	4700	75.375	3037	1351
EVOLUTION 42 DD	62.25 X 91.25 X 77.25	3800	51.875	2621	1093
EVOLUTION 54 DD	65.25 X 91.25 X 77.25	4200	63.875	2786	1208
EVOLUTION 66 DD	77.25 X 91.25 X 77.25	4700	75.875	3034	1351

** VALUES INCLUDE Ω_0

NOTE: EVOLUTION STEAM GENERATOR IS OPTIONAL EQUIPMENT. STEAM GENERATOR SEISMIC BASE CONFIGURATION IS USED WHEN STEAM GENERATOR IS PROVIDED, STANDARD SEISMIC BASE CONFIGURATION USED WHEN STEAM GENERATOR IS NOT PROVIDED.

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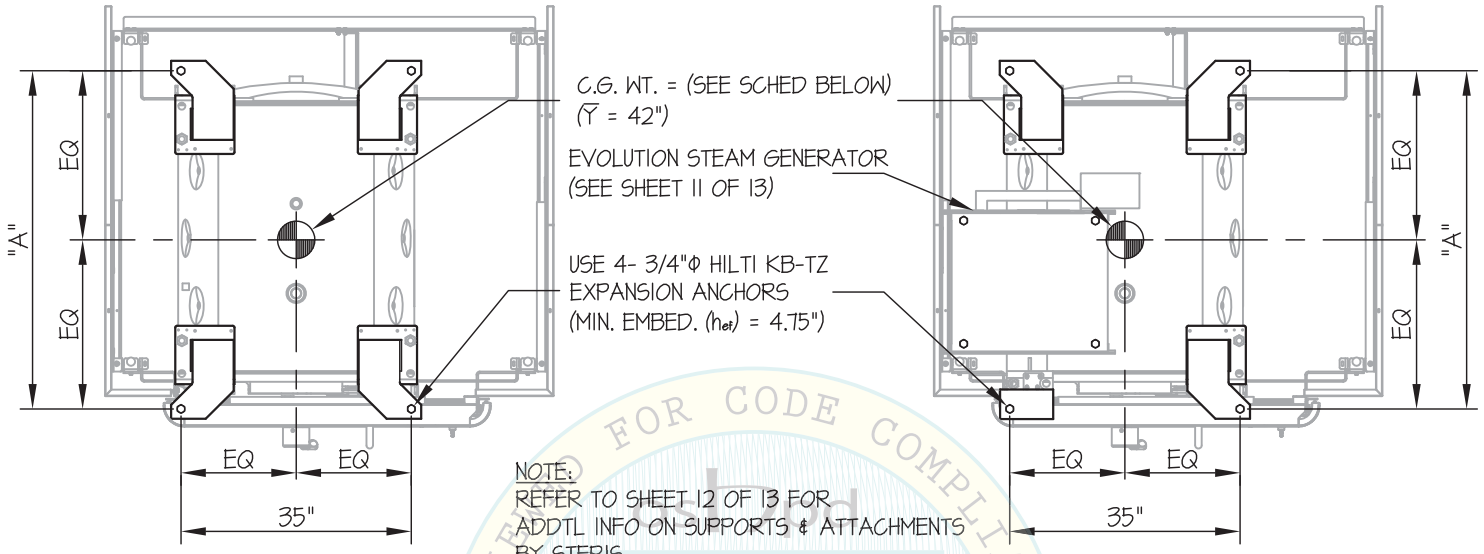
SHEET 5 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 2.2$, z/h = 0 — CONCRETE SLAB



PLAN AT BASE
(STANDARD SEISMIC BASE)

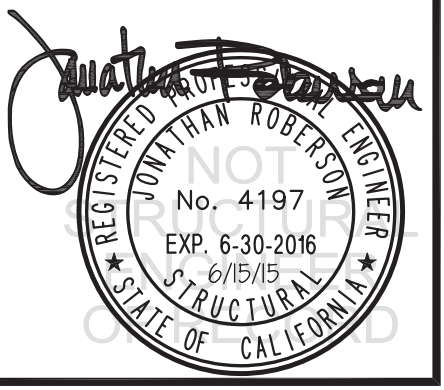
NOTE:
REFER TO SHEET 12 OF 13 FOR ADDTL INFO ON SUPPORTS & ATTACHMENTS BY STERIS

PLAN AT BASE
(STEAM GENERATOR SEISMIC BASE)

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "A" (IN.)	** T_u (LB/BOLT)	** V_u (LB/BOLT)
EVOLUTION 42 SD	65 X 91.25 X 77.25	3800	51.375	3655	1416
EVOLUTION 54 SD	77 X 91.25 X 77.25	4200	63.375	3894	1565
EVOLUTION 66 SD	89 X 91.25 X 77.25	4700	75.375	4241	1751
EVOLUTION 42 DD	62.25 X 91.25 X 77.25	3800	51.875	3648	1416
EVOLUTION 54 DD	65.25 X 91.25 X 77.25	4200	63.875	3889	1565
EVOLUTION 66 DD	77.25 X 91.25 X 77.25	4700	75.875	4243	1751

** VALUES INCLUDE Ω_0

NOTE: EVOLUTION STEAM GENERATOR IS OPTIONAL EQUIPMENT. STEAM GENERATOR SEISMIC BASE CONFIGURATION IS USED WHEN STEAM GENERATOR IS PROVIDED, STANDARD SEISMIC BASE CONFIGURATION USED WHEN STEAM GENERATOR IS NOT PROVIDED.



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DES. J. ROBERSON
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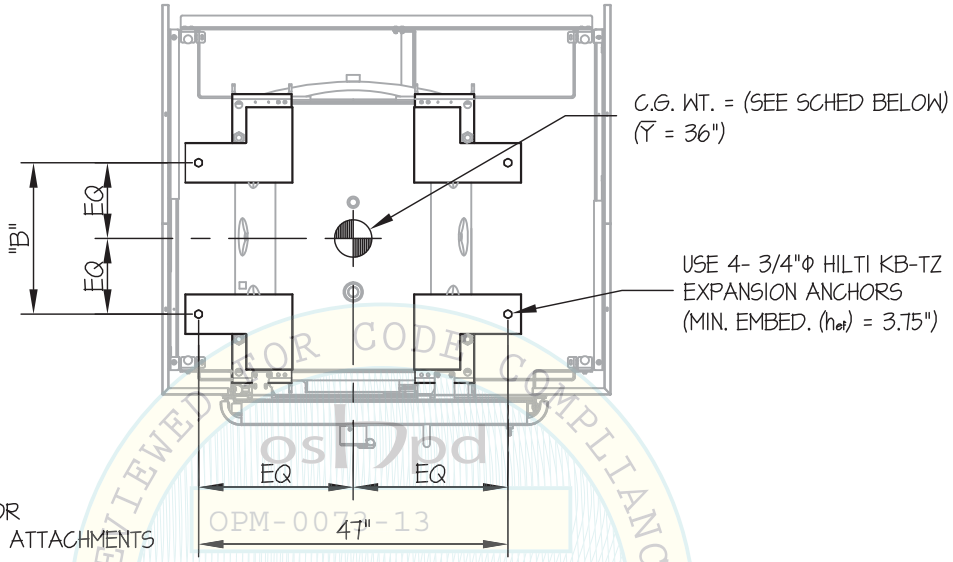
SHEET 6 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 1.50$, z/h = 0 — CONCRETE SLAB

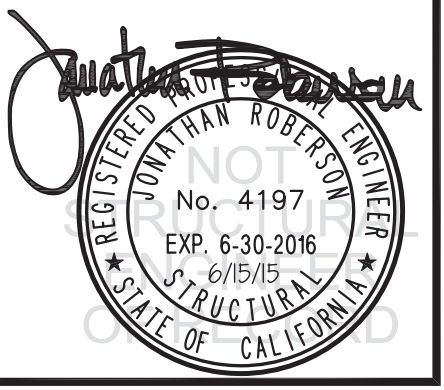


PLAN AT BASE

NOTE:
REFER TO SHEET 12 OF 13 FOR
ADDTL INFO ON SUPPORTS & ATTACHMENTS
BY STERIS

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "B" (IN.)	** T_U (LB/BOLT)	** V_U (LB/BOLT)
AMSCO 400 36 SD	63.5 X 70 X 75.25	3800	23	2875	960
AMSCO 400 48 SD	75.5 X 70 X 75.25	4200	35	2039	1061
AMSCO 400 60 SD	87.5 X 70 X 75.25	4700	47	1658	1187
AMSCO 400 36 DD	62.25 X 70 X 75.25	3800	23.5	2811	960
AMSCO 400 48 DD	74.25 X 70 X 75.25	4200	35.5	2008	1061
AMSCO 400 60 DD	86.25 X 70 X 75.25	4700	47.5	1653	1187
CENTURY 36 SD	59 X 70 X 75.25	3800	23	2875	960
CENTURY 48 SD	71 X 70 X 75.25	4200	35	2039	1061
CENTURY 60 SD	83 X 70 X 75.25	4700	47	1658	1187
CENTURY 36 DD	58.25 X 70 X 75.25	3800	23.5	2811	960
CENTURY 48 DD	70.25 X 70 X 75.25	4200	35.5	2008	1061
CENTURY 60 DD	80.25 X 70 X 75.25	4700	47.5	1653	1187

** VALUES INCLUDE Ω_0



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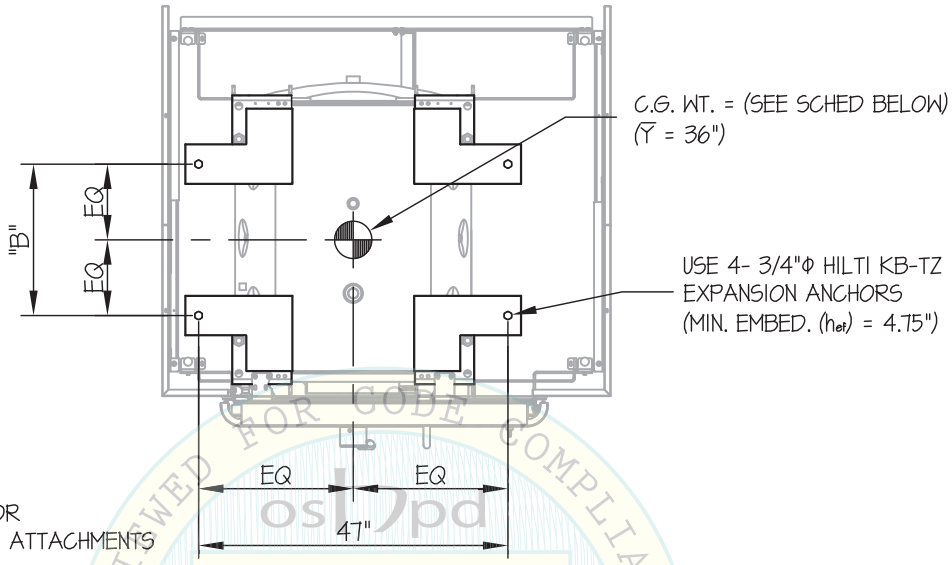
DES.	J. ROBERSON	SHEET 7
JOB NO.	14-1501	
DATE	6/15/15	OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 2.00$, $z/h = 0$ — CONCRETE SLAB



PLAN AT BASE

NOTE:
REFER TO SHEET 12 OF 13 FOR ADDTL INFO ON SUPPORTS & ATTACHMENTS BY STERIS

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "B" (IN.)	** T_U (LB/BOLT)	** V_U (LB/BOLT)
AMSCO 400 36 SD	63.5 X 70 X 75.25	3800	23	4129	1283
AMSCO 400 48 SD	75.5 X 70 X 75.25	4200	35	3042	1418
AMSCO 400 60 SD	87.5 X 70 X 75.25	4700	47	2572	1586
AMSCO 400 36 DD	62.25 X 70 X 75.25	3800	23.5	4044	1283
AMSCO 400 48 DD	74.25 X 70 X 75.25	4200	35.5	3001	1418
AMSCO 400 60 DD	86.25 X 70 X 75.25	4700	47.5	2564	1586
CENTURY 36 SD	59 X 70 X 75.25	3800	23	4129	1283
CENTURY 48 SD	71 X 70 X 75.25	4200	35	3042	1418
CENTURY 60 SD	83 X 70 X 75.25	4700	47	2572	1586
CENTURY 36 DD	58.25 X 70 X 75.25	3800	23.5	4044	1283
CENTURY 48 DD	70.25 X 70 X 75.25	4200	35.5	3001	1418
CENTURY 60 DD	80.25 X 70 X 75.25	4700	47.5	2564	1586

** VALUES INCLUDE Ω_0

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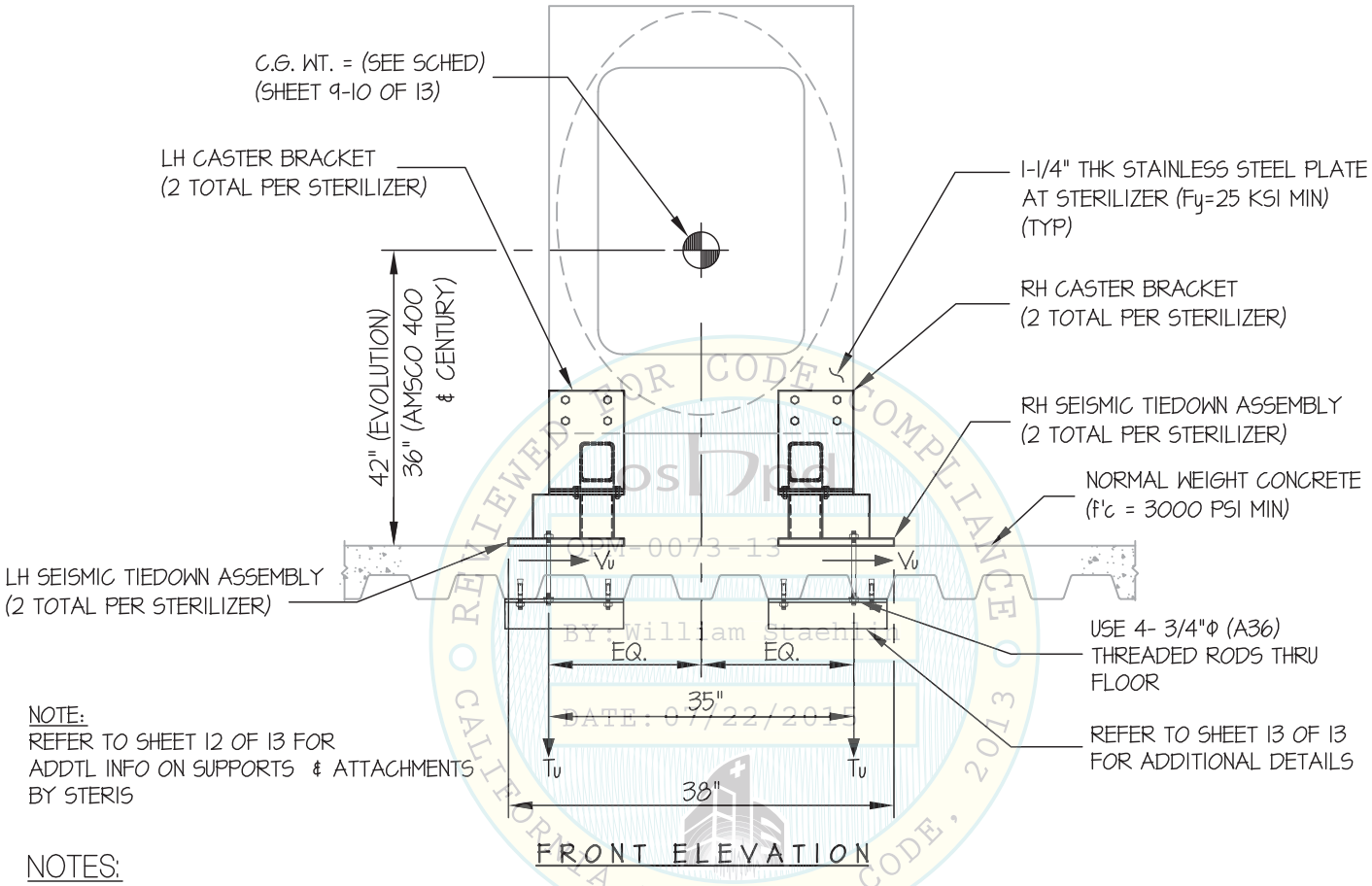
SHEET 8 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



FRONT ELEVATION

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NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. (S_{DS} = 2.00, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_0 = 1.5, z/h ≤ 1)

   HORIZONTAL FORCE (E_h) = 2.40 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.60 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.40 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
4. SEE GENERAL NOTES: SHEET 1 AND 2

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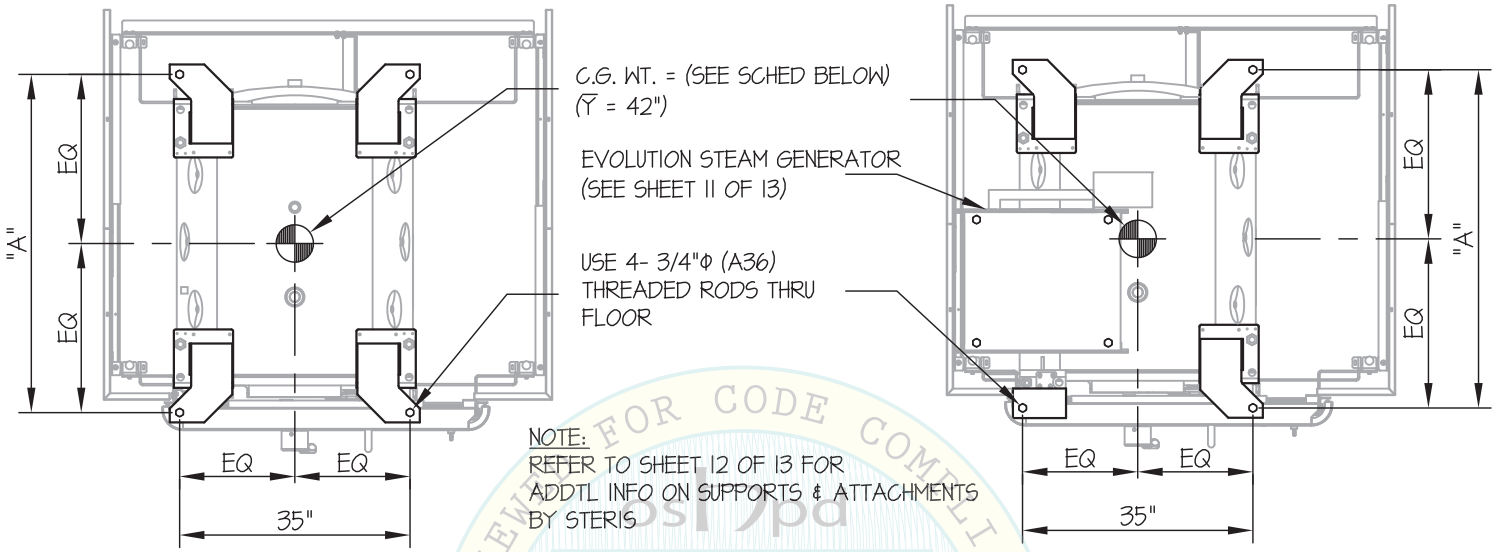
DATE 6/15/15
SHEET 9 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — $S_{DS} \leq 2.00$, $z/h \leq 1$ — CONCRETE SLAB ON METAL DECK



NOTE:
REFER TO SHEET 12 OF 13 FOR ADDTL INFO ON SUPPORTS & ATTACHMENTS BY STERIS

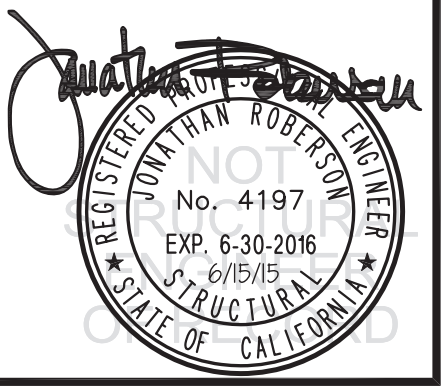
PLAN AT BASE
(STANDARD SEISMIC BASE)

PLAN AT BASE
(STEAM GENERATOR SEISMIC BASE)

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "A" (IN.)	** T_U (LB/BOLT)	** V_U (LB/BOLT)
EVOLUTION 42 SD	65 X 91.25 X 77.25	3800	51.375	6115	2280
EVOLUTION 54 SD	77 X 91.25 X 77.25	4200	63.375	6525	2520
EVOLUTION 66 SD	89 X 91.25 X 77.25	4700	75.375	7123	2820
EVOLUTION 42 DD	62.25 X 91.25 X 77.25	3800	51.875	6105	2280
EVOLUTION 54 DD	65.25 X 91.25 X 77.25	4200	63.875	6517	2520
EVOLUTION 66 DD	77.25 X 91.25 X 77.25	4700	75.875	7117	2820

** VALUES DO NOT INCLUDE Ω_o

NOTE: EVOLUTION STEAM GENERATOR IS OPTIONAL EQUIPMENT. STEAM GENERATOR SEISMIC BASE CONFIGURATION IS USED WHEN STEAM GENERATOR IS PROVIDED, STANDARD SEISMIC BASE CONFIGURATION USED WHEN STEAM GENERATOR IS NOT PROVIDED.



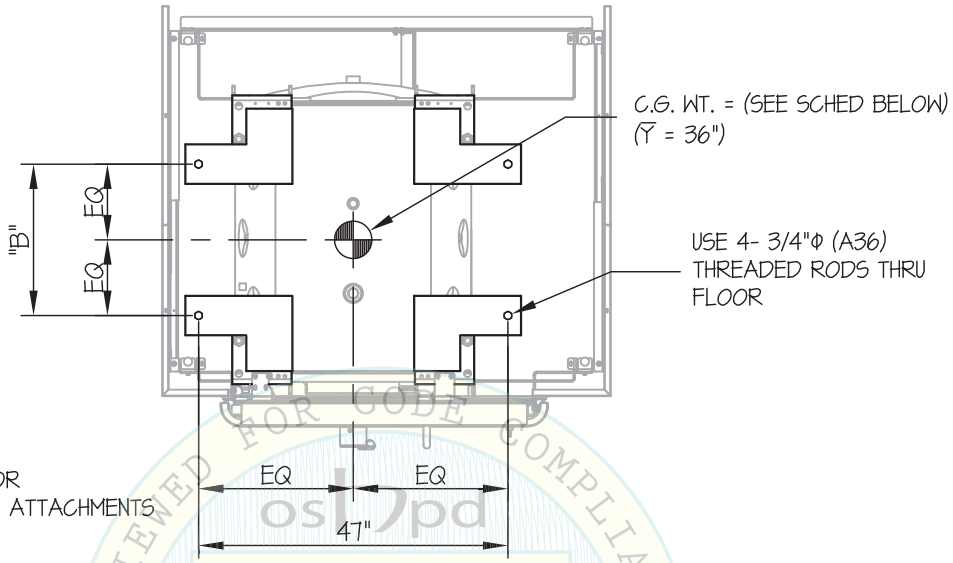
REVIEWED FOR CODE COMPLIANCE
OPM-0073-13
REVIEWED BY: William Staehlin
DATE: 07/22/2015
CALIFORNIA BUILDING CODE 2013
NOT STRUCTURAL ENGINEERED

STERIS CORPORATION

AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5

DES. J. ROBERSON
JOB NO. 14-1501
DATE 6/15/15
SHEET 10 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS | $S_{DS} \leq 2.00$, $z/h \leq 1$ | CONCRETE SLAB ON METAL DECK

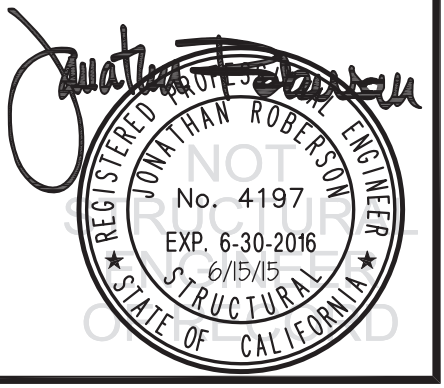


PLAN AT BASE

NOTE:
REFER TO SHEET 12 OF 13 FOR
ADDTL INFO ON SUPPORTS & ATTACHMENTS
BY STERIS

MODEL	UNIT SIZE	WEIGHT (LB)	DIM. "B" (IN.)	** T_u (LB/BOLT)	** V_u (LB/BOLT)
AMSCO 400 36 SD	63.5 X 70 X 75.25	3800	23	7710	2280
AMSCO 400 48 SD	75.5 X 70 X 75.25	4200	35	5817	2520
AMSCO 400 60 SD	87.5 X 70 X 75.25	4700	47	5029	2820
AMSCO 400 36 DD	62.25 X 70 X 75.25	3800	23.5	7558	2280
AMSCO 400 48 DD	74.25 X 70 X 75.25	4200	35.5	5744	2520
AMSCO 400 60 DD	86.25 X 70 X 75.25	4700	47.5	5015	2820
CENTURY 36 SD	59 X 70 X 75.25	3800	23	7710	2280
CENTURY 48 SD	71 X 70 X 75.25	4200	35	5817	2520
CENTURY 60 SD	83 X 70 X 75.25	4700	47	5029	2820
CENTURY 36 DD	58.25 X 70 X 75.25	3800	23.5	7558	2280
CENTURY 48 DD	70.25 X 70 X 75.25	4200	35.5	5744	2520
CENTURY 60 DD	82.25 X 70 X 75.25	4700	47.5	5015	2820

** VALUES DO NOT INCLUDE Ω_0



REVIEWED FOR CODE COMPLIANCE
OSHPD PREAPPROVED
BY: William Staehlin
DATE: 07/22/2015
OSHPD BUILDING CODE
NOT STRUCTURAL ENGINEERED

STERIS CORPORATION

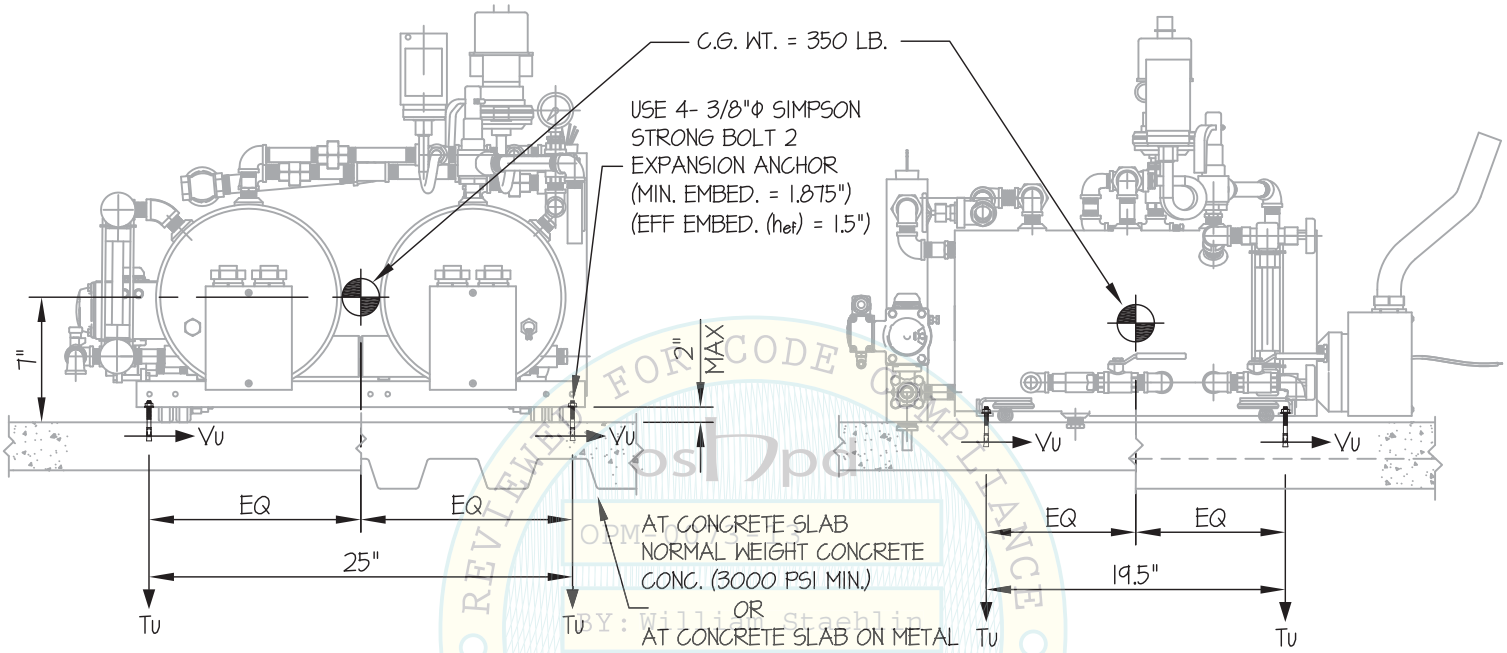
AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5

DES.	J. ROBERSON
JOB NO.	14-1501
DATE	6/16/15

SHEET 11 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB / CONCRETE SLAB ON METAL DECK



FRONT ELEVATION
(EVOLUTION STEAM GENERATOR)

SIDE ELEVATION
(EVOLUTION STEAM GENERATOR)

NOTES:

1. FORCES ARE DETERMINED PER 2013 CALIFORNIA BUILDING CODE AND ASCE 7-10. STRENGTH DESIGN IS USED. (S_{DS} = 2.00, a_p = 1.0, I_p = 1.5, R_p = 1.5, Ω_o = 1.5, z/h ≤ 1)

   HORIZONTAL FORCE (E_h) = 2.40 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.60 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.40 W_p

2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.

3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.

4. SEE GENERAL NOTES: SHEET 1 AND 2

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2016
6/15/15
STRUCTURAL
STATE OF CALIFORNIA

OPM-0073-13 REVIEWED FOR CODE COMPLIANCE 2013 CALIFORNIA BUILDING CODE
BY: William Staehlin
DATE: 07/22/2015
NOT STRUCTURAL ENGINEERED OF RECORD

STERIS CORPORATION

AMSCO, EVOLUTION & CENTURY STEAM STERILIZERS 26 X 37.5

DES. J. ROBERSON
JOB NO. 14-1501
DATE 6/15/15
SHEET 12 OF 13 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

DETAILS

LH CASTER BRACKET- COMPONENT 146676-344
(3/8" THK, ASTM-A36, 36 KSI MIN)
(2 TOTAL)

(4) 1/2"Φ (GRADE 5) BOLTS
(TYP, PROVIDED BY STERIS)

TOP PLATE - COMPONENT 56402-053
(3/4" THK, ASTM A36, Fy=36 KSI MIN)
(4 TOTAL)

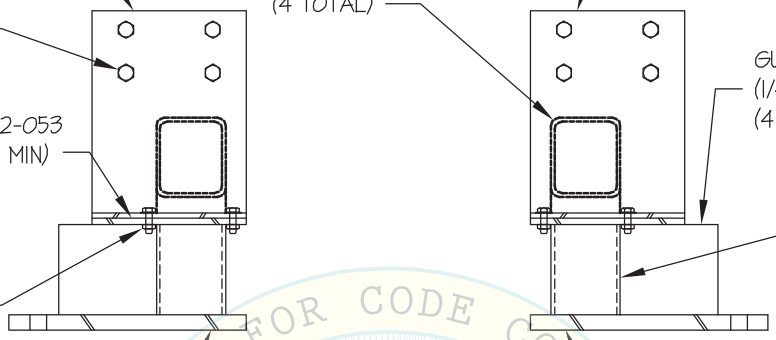
(4) 1/2"Φ (GRADE 8) BOLTS
(TYP, PROVIDED BY STERIS)

TUBE BRACE -
COMPONENT 146676-343
(TS4X3X3/8" ASTM A500
GR B, Fy=42 KSI MIN)
(4 TOTAL)

RH CASTER BRACKET- COMPONENT 146676-345
(3/8" THK, ASTM A36, 36 KSI MIN)
(2 TOTAL)

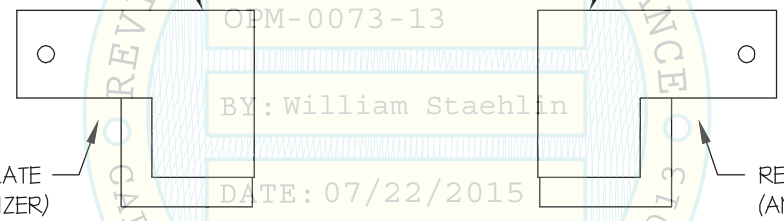
GUSSET - COMPONENT 56402-054
(1/4" THK, ASTM A36, Fy=36 KSI MIN)
(4 TOTAL)

TUBE SUPPORT -
COMPONENT 56402-052
(TS4X3X3/8" ASTM A500
GR B, Fy=42 KSI MIN)
(4 TOTAL)



BOTTOM PLATE - COMPONENT 100179672
(1" THK, C1018, ASTM A108, Fy=45 KSI MIN)
(2 TOTAL, AMSCO 400 & CENTURY STERILIZER)

BOTTOM PLATE - COMPONENT 100179672
(1" THK, C1018, ASTM A108, Fy=45 KSI MIN.)
(2 TOTAL, AMSCO 400 & CENTURY STERILIZER)



REFLECTED PLAN AT LH BASEPLATE
(AMSCO 400 & CENTURY STERILIZER)

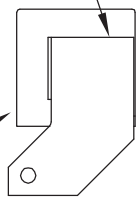
REFLECTED PLAN AT RH BASEPLATE
(AMSCO 400 & CENTURY STERILIZER)

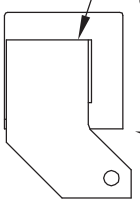
LH SEISMIC TIEDOWN ASSEMBLY- 100179671 (2 TOTAL)
(AMSCO 400 & CENTURY STERILIZER)

RH SEISMIC TIEDOWN ASSEMBLY- 100179670 (2 TOTAL)
(AMSCO 400 & CENTURY STERILIZER)

BOTTOM PLATE - COMPONENT 100549710
(1" THK, C1018, ASTM A108, Fy=45 KSI MIN)
(2 TOTAL, EVOLUTION STERILIZER)

BOTTOM PLATE - COMPONENT 100549710
(1" THK, C1018, ASTM A108, Fy=45 KSI MIN.)
(2 TOTAL, EVOLUTION STERILIZER)





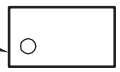
REFLECTED PLAN AT LH BASEPLATE
(EVOLUTION STERILIZER)

REFLECTED PLAN AT RH BASEPLATE
(EVOLUTION STERILIZER)

LH SEISMIC TIEDOWN ASSEMBLY- 100549968 (2 TOTAL)
(EVOLUTION STERILIZER)

RH SEISMIC TIEDOWN ASSEMBLY- 100549969 (2 TOTAL)
(EVOLUTION STERILIZER)

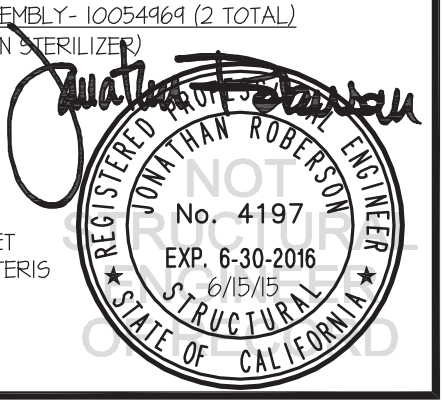
BOTTOM PLATE - COMPONENT 136816-835
(1" THK, C1018, ASTM A108, Fy=45 KSI MIN)
(1 TOTAL, EVOLUTION STERILIZER W/ STEAM GENERATOR)



REFLECTED PLAN AT LH BASEPLATE
(EVOLUTION STERILIZER W/ STEAM GENERATOR)

LH SEISMIC TIEDOWN ASSEMBLY- 136816-838 (1 TOTAL)
(EVOLUTION STERILIZER W/ STEAM GENERATOR)

NOTE: ALL COMPONENTS LISTED ON THIS SHEET ARE SUPPLIED BY STERIS



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CALIFORNIA BUILDING CODE 2013
oshpd
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BY: William Staehlin
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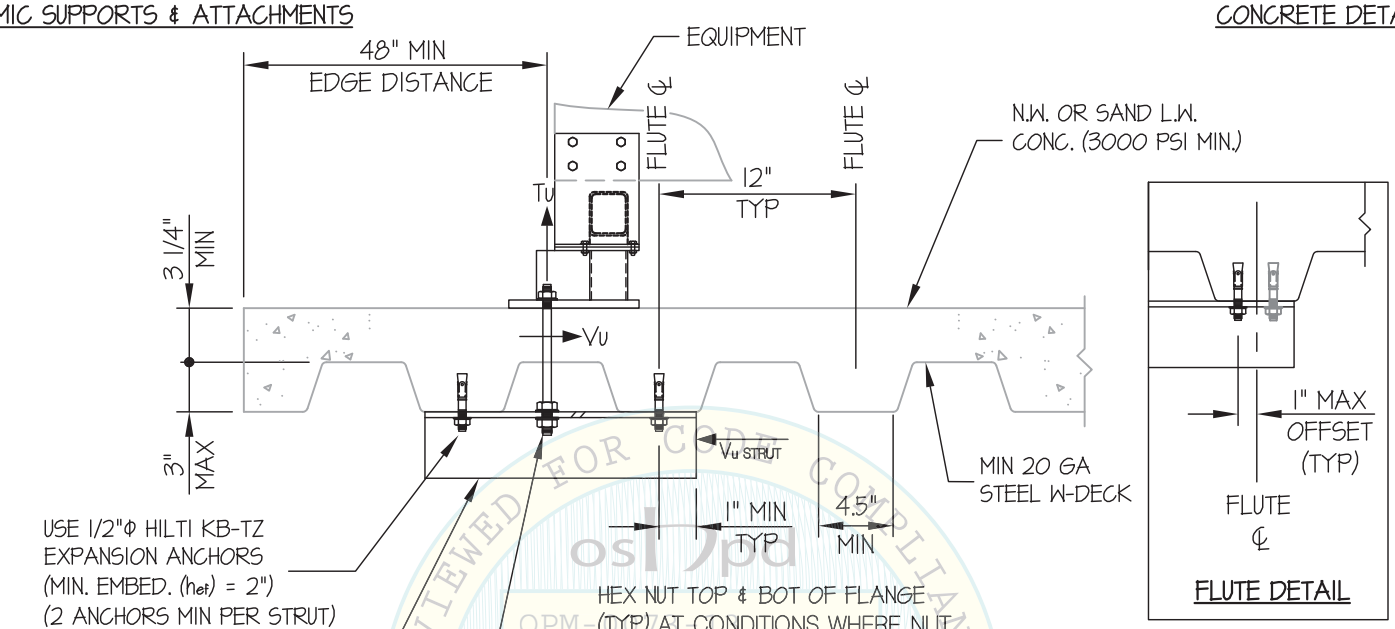
DES.	J. ROBERSON
JOB NO.	14-1501
DATE	6/15/15

SHEET 13 OF 13 SHEETS

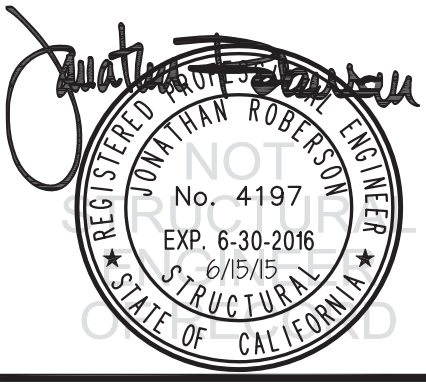
SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE DETAILS



MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL

REVIEWED FOR CODE COMPLIANCE
OPM-0073-13
BY: WILLIAM STAEHLIN
DATE: 07/22/2015
CALIFORNIA BUILDING CODE, 2013



NOT STRUCTURAL ENGINEERED