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

OFFICE USE ONLY

APPLICATION #: OPM-0408

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Steris Corporation

Manufacturer's Technical Representative: Lloyd Dpuis Jr.

Mailing Address: 490 Boulevard Armand-Paris, Ville de Québec, QC G1C8A3

Telephone: (418) 664-1549 Email: Lloyd_Dupuis@steris.com

Product Information

Product Name: AMSCO 70 SERIES REPROCESSING SINKS

Product Type: Other Mechanical Components Constructed of Sheet Metal Framing

Product Model Number: 72(2-Sink, 80" Long), 72(2-Sink, 94" long), 73(3-sink, 106" long) & 73(3-sink. 120" Long)

General Description: Sinks used for cleaning and decontamination of medical tools and equipment

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:

Registered Design Professonal Preparing Engineering Recommendations

Company Name: EASE

Name: Jonathan Roberson California License Number: S4197

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

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

OSHPD 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, 2019 (CBSC 2019) 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 2019 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

OSHPD Approval

Date: 5/1/2020

Name: Haesong Lim Title: Senior Structural Engineer

Condition of Approval (if applicable):

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-0408-19

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **STERIS CORPORATION**

EQUIPMENT NAME: **AMSCO 70 REPROCESSING SINKS**

Date: 1/30/20

GENERAL NOTES

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 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 2019 CALIFORNIA BUILDING CODE WHERE S_{DS} IS NOT GREATER THAN 1.60 & 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} = 1.80, a_p = 1.0, I_p = 1.5, R_p = 2.5, z/h = 0 AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_o
   WHERE S_{DS} = 2.30, a_p = 1.0, I_p = 1.5, R_p = 2.5, z/h = 0 AT CONCRETE SLAB & z/h $\leq$ 1 AT CONCRETE SLAB ON METAL DECK.
   SEE FOLLOWING SHEETS FOR Ω_o
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 ANY ELEVATION 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 2019 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. 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 6hef FROM THIS UNIT'S ANCHORS.

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2020
1/30/20
STRUCTURAL
STATE OF CALIFORNIA

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DES. J. ROBERSON
JOB NO. 14-1919
DATE 1/30/20
SHEET 2 OF 9 SHEETS

10. **POST INSTALLED 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 TZ	ESR-1917	2"	6.75"	12"	See Detail "A"	25 FT-LB	N/A
5/8"	Normal Weight	3000	Hilti Hit-Hy 200	ESR-3187	3.5"	13"	33"	5"	N/A	3716 lb
5/8"	Normal Weight	3000	Hilti Hit-Hy 200	ESR-3187	5"	13"	33"	6"	N/A	5921 lb

B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 33" AWAY MINIMUM (i.e. - CORNER). SEE ADJACENT DETAIL FOR ADDITIONAL MINIMUM ALLOWABLE CONCRETE EDGE DISTANCES.

C. TESTING AND SPECIAL INSPECTION OF POST INSTALLED 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.

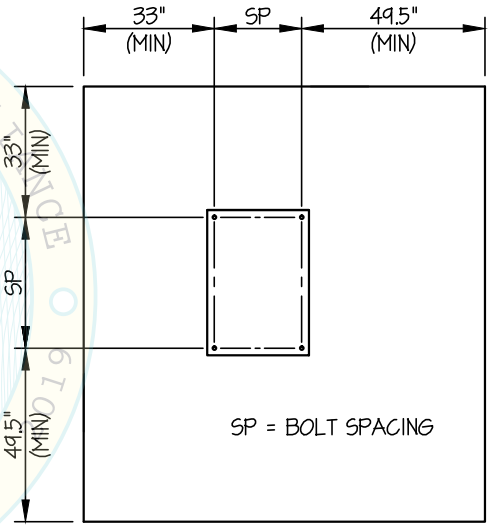
(ii) ACCEPTANCE CRITERIA:

- 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 NOT APPLICABLE FOR EPOXY ANCHORS.

(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.



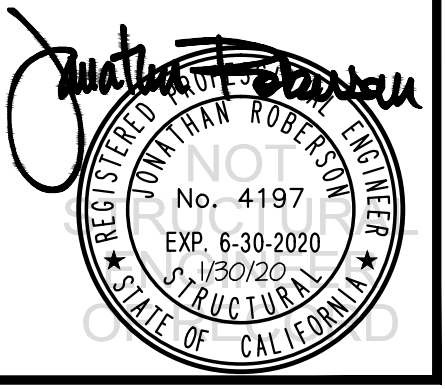
TYPICAL CONCRETE EDGE DETAIL

11. BOLTS THROUGH CONCRETE ON METAL DECK

A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT (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.



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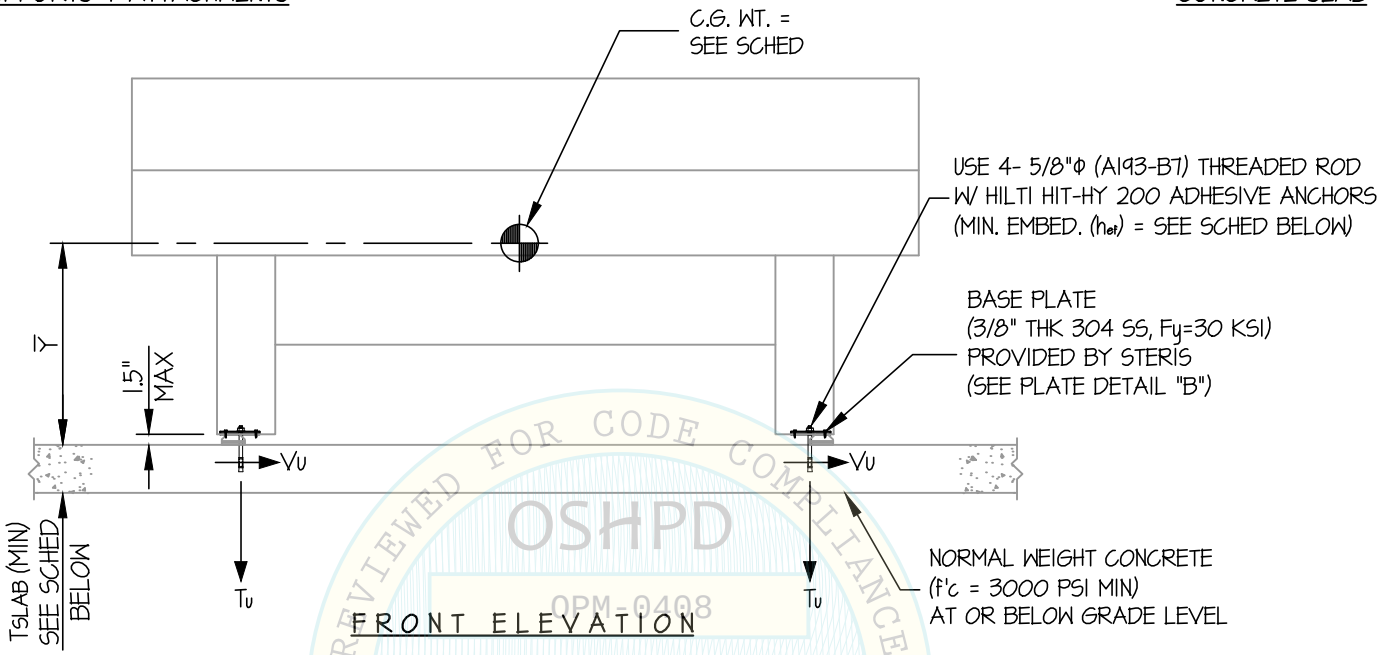
SHEET 3 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



FRONT ELEVATION

	ANCHORS				
MAX SDS	TYPE	DIAM	EFF EMBED	QTY	TSLAB
1.80	HILTI HIT-HY 200	5/8"	3.5"	4	5"
2.30	HILTI HIT-HY 200	5/8"	5"	4	7"

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.** STRENGTH DESIGN IS USED. (a_p = 1.0, I_p = 1.5, R_p = 2.5, Ω_0 = 2.0, 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: SHEETS 1 AND 2.

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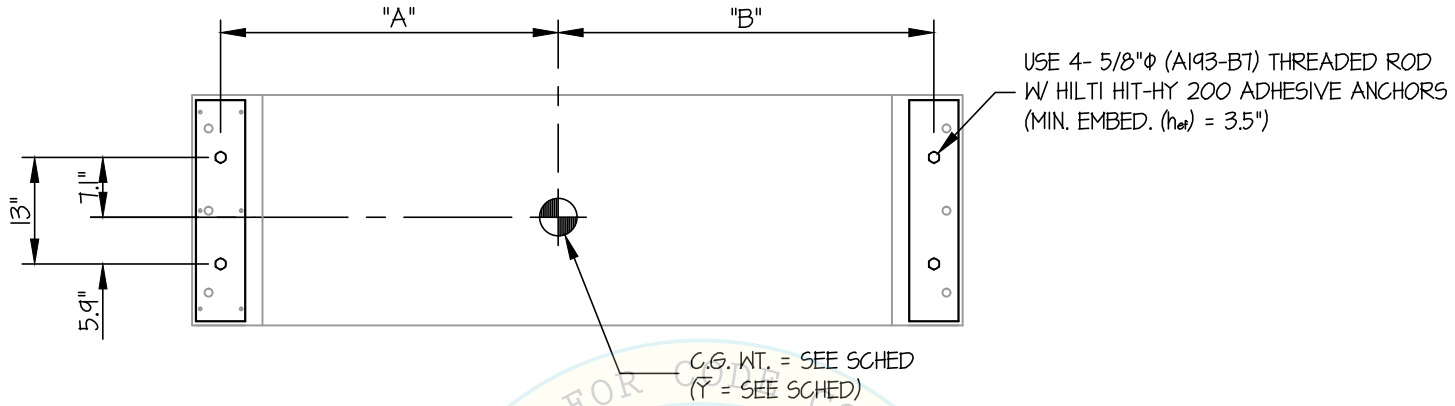
SHEET 4 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS — MAX $S_{DS} \leq 1.80$ — CONCRETE SLAB



PLAN AT BASE

UNIT	LENGTH (in.)	WEIGHT (lb)	$\bar{Y}$ (in.)	"A" (in.)	"B" (in.)	* Tu (lb.)	* Vu (lb.)
AMSCO 72 2-BAY SINK	80	1056	30.1	30.6	30.4	1972	596
AMSCO 72 2-BAY SINK	94	1093	30.6	30.6	30.4	2077	617
AMSCO 73 3-BAY SINK	106	1347	30.6	42.6	44.4	2557	763
AMSCO 73 3-BAY SINK	120	1366	30.7	42.6	44.4	2602	774

* VALUES INCLUDE Ω_0

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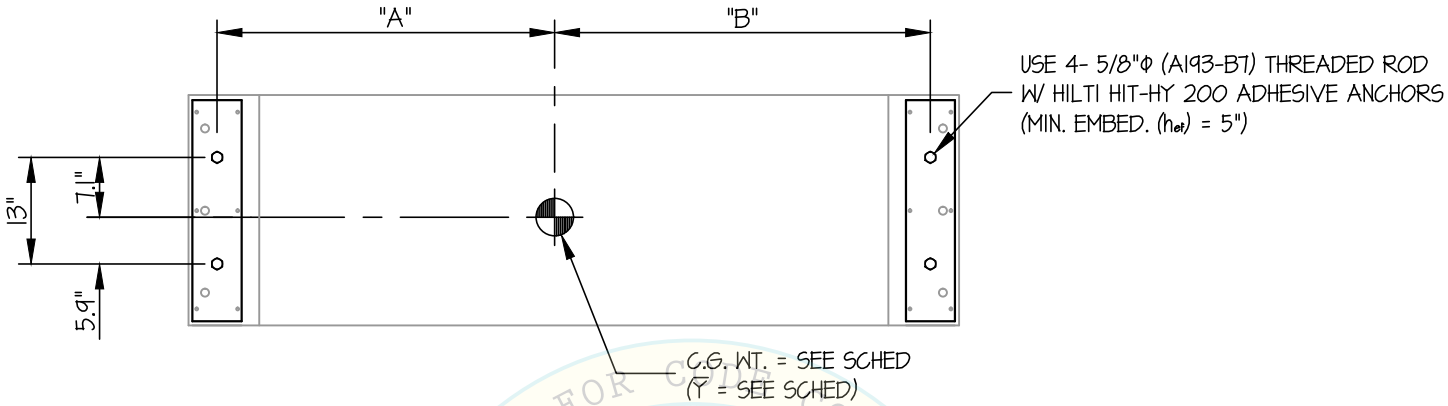
SHEET 5 OF 9 SHEETS

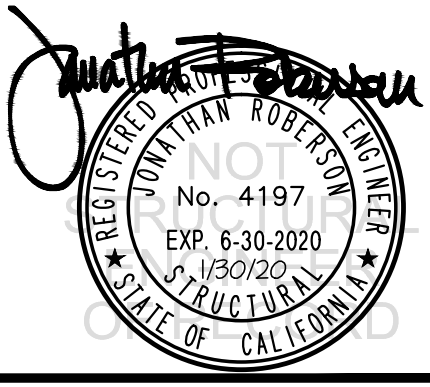
SEISMIC SUPPORTS & ATTACHMENTS — 1.80 < MAX S_{DS} ≤ 2.30 — CONCRETE SLAB



PLAN AT BASE

UNIT	LENGTH (in.)	WEIGHT (lb)	"Y" (in.)	"A" (in.)	"B" (in.)	* Tu (lb.)	* Vu (lb.)
AMSCO 72 2-BAY SINK	80	1056	30.1	30.6	30.4	2588	761
AMSCO 72 2-BAY SINK	94	1093	30.6	30.6	30.4	2726	788
AMSCO 73 3-BAY SINK	106	1347	30.6	42.6	44.4	3346	975
AMSCO 73 3-BAY SINK	120	1366	30.7	42.6	44.4	3404	989

* VALUES INCLUDE Ω_0



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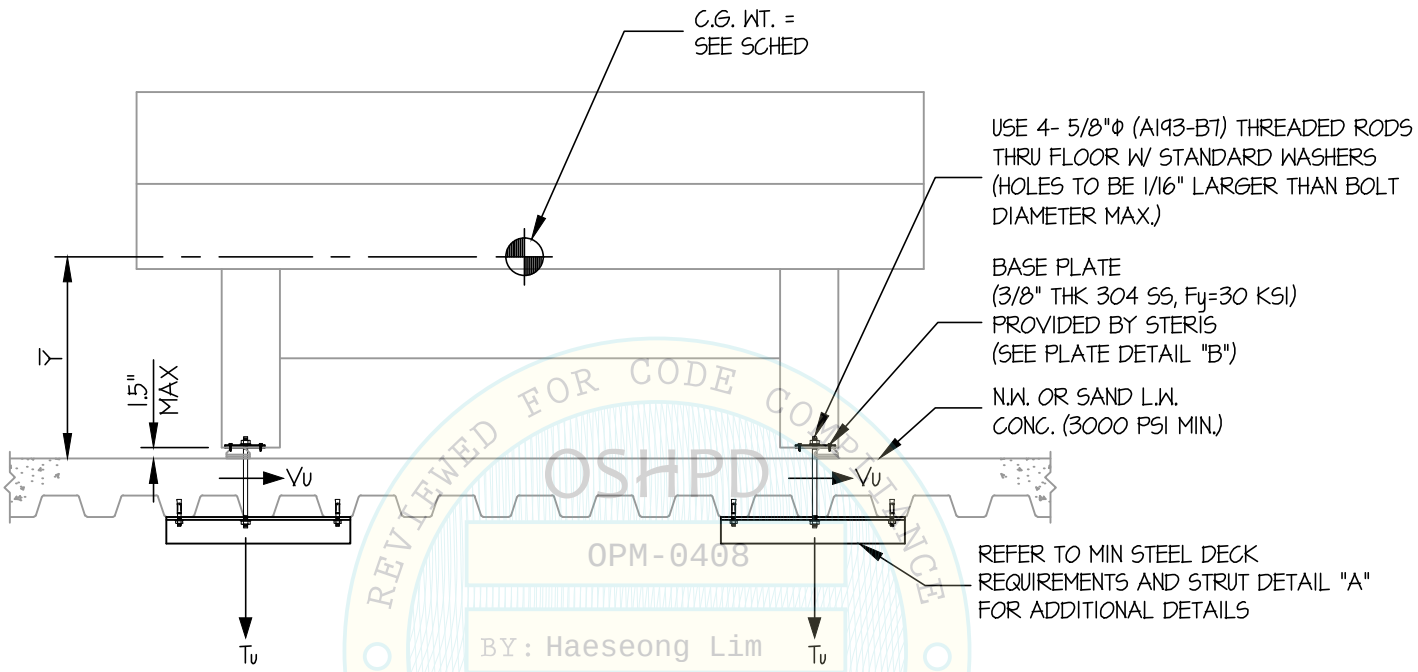
SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



FRONT ELEVATION

NOTES:

1. **FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.**
   STRENGTH DESIGN IS USED. (S_{DS} = 2.30, a_p = 1.0, I_p = 1.5, R_p = 2.5, Ω_o = 2.0, z/h ≤ 1)

   HORIZONTAL FORCE (E_h) = 1.66 W_p
   HORIZONTAL FORCE (E_{mh}) = 3.32 W_p (FOR CONCRETE ANCHORAGE)
   VERTICAL FORCE (E_v) = 0.46 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: SHEETS 1 AND 2.

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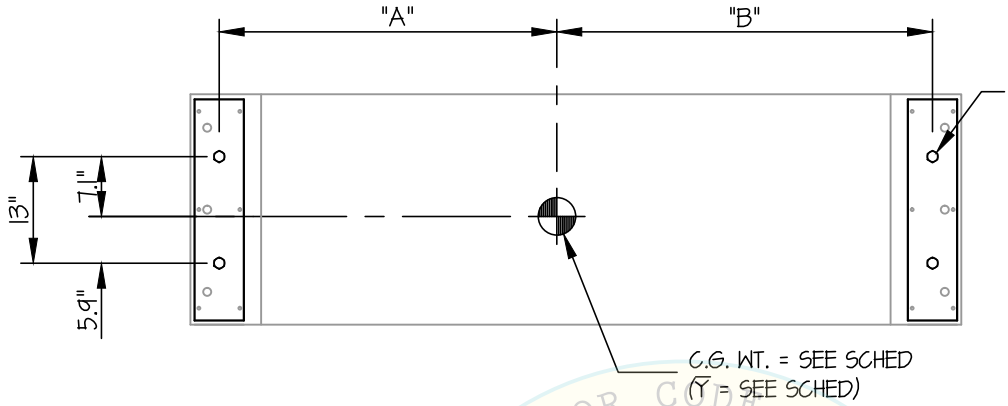
SHEET 7 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

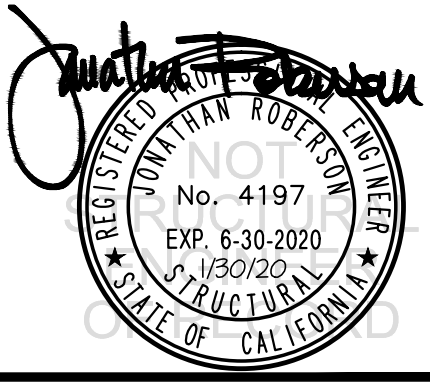
CONCRETE SLAB ON METAL DECK



PLAN AT BASE

UNIT	LENGTH (in.)	WEIGHT (lb)	"Y" (in.)	"A" (in.)	"B" (in.)	** Tu (lb.)	** Vu (lb.)
AMSCO 72 2-BAY SINK	80	1056	30.1	30.6	30.4	2050	611
AMSCO 72 2-BAY SINK	94	1093	30.6	30.6	30.4	2160	632
AMSCO 73 3-BAY SINK	106	1347	30.6	42.6	44.4	2656	782
AMSCO 73 3-BAY SINK	120	1366	30.7	42.6	44.4	2703	793

** VALUES INCLUDE Ω₀



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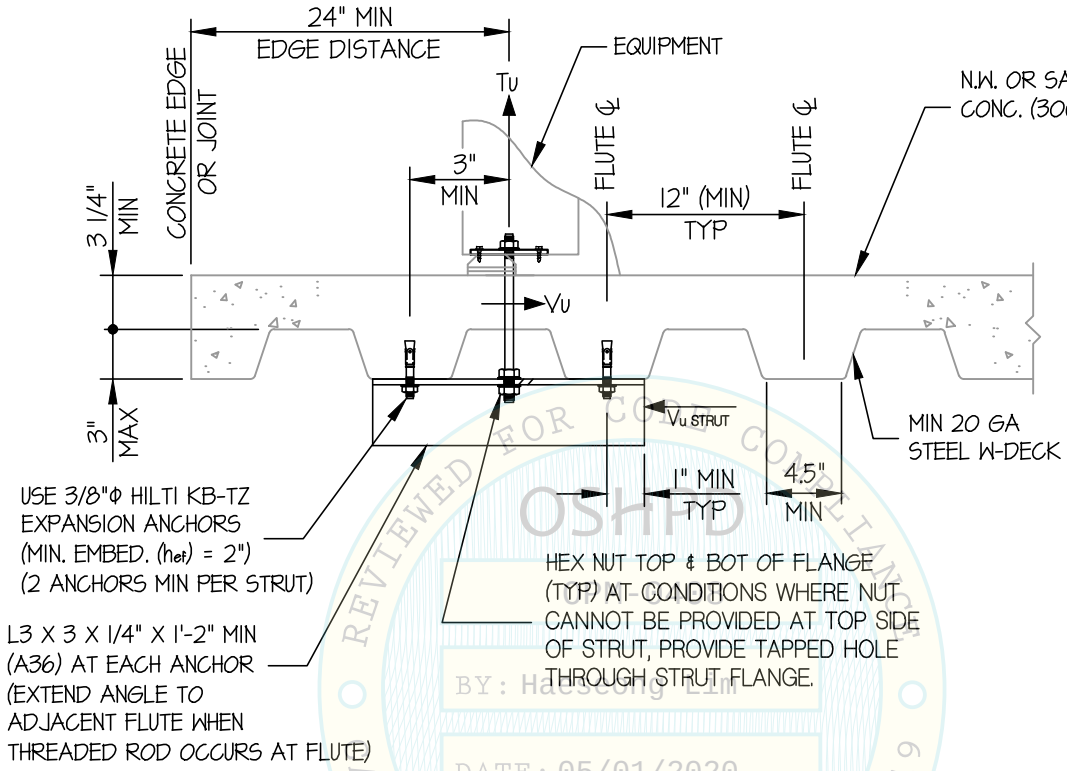
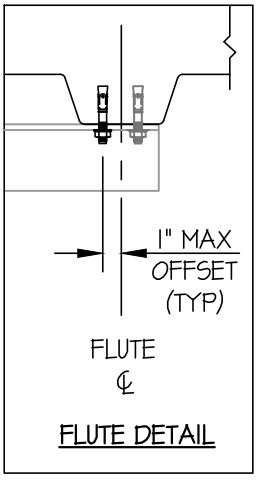
SEISMIC SUPPORTS & ATTACHMENTS

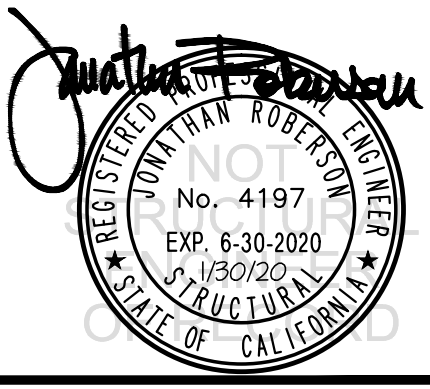


MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (A)

CONCRETE DETAIL



FLUTE DETAIL



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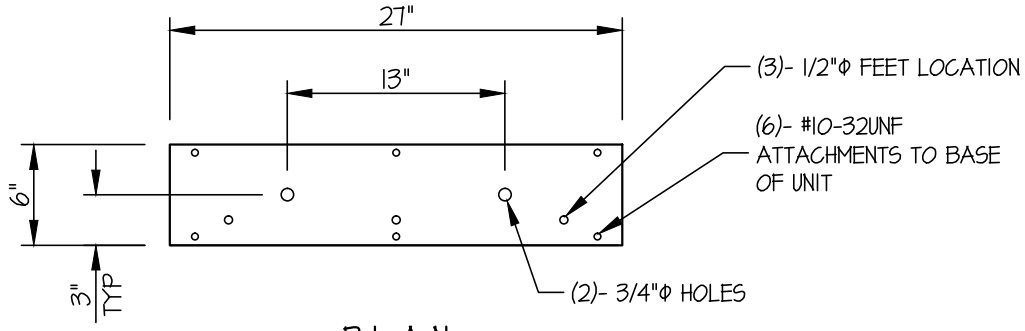
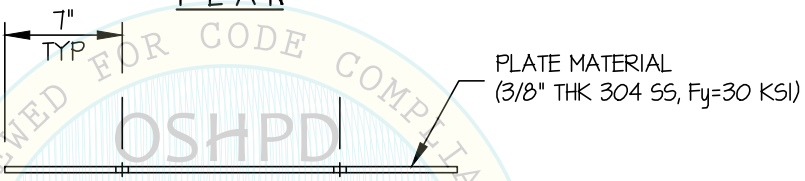
SHEET 9 OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

PLATE DETAIL



PLAN



FRONT

BRACKET DETAIL (B)