



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0274

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: Stryker Corporation

Manufacturer's Technical Representative: David Young

Mailing Address: 1941 Stryker Way, Portage, MI 49002

Telephone: (184) 382-4435 Email: david.young2@stryker.com

Product Information

Product Name: STERIZON VP4 STERILIZER & STERIZON 125L + STERILIZER

Product Type: Other Electrical & Mechanical Coponents

Product Model Number: VP4, 125L

General Description: Ozone based, low temperature sterilizer for medical 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: Office Manager

Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dvnamic Needs

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional 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: (951) 295-1892

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: 9/13/2021

Name: Kamalpreet Kalsi

Title: Senior Structural Engineer

Condition of Approval (if applicable): _____





**EQUIPMENT ANCHORAGE
& SEISMIC ENGINEERING**

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

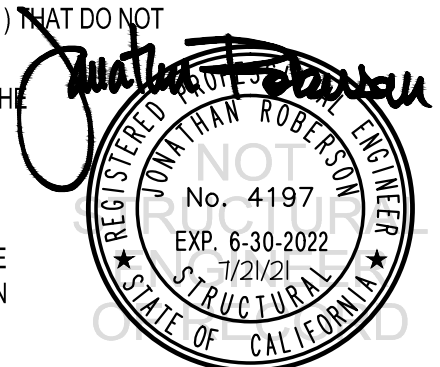
Office of Statewide Health Planning and Development
PREAPPROVAL OF MANUFACTURER'S CERTIFICATION
OPM-0274

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER: **STRYKER** Sheet: 1 of 9
EQUIPMENT NAME: **STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer** Date: 7/21/21

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 1.90, 2.10 & 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 $S_{ds} = 1.90$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h = 0$ AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_o
WHERE $S_{ds} = 2.10$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h = 0$ AT CONCRETE SLAB. SEE FOLLOWING SHEETS FOR Ω_o
WHERE $S_{ds} = 2.30$, $a_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $z/h = 0$ 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 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 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.



STRYKER

STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

DES. **J. ROBERSON**

JOB NO. **11-2105**

DATE **7/21/21**

SHEET

2

OF **9** SHEETS

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
3/8"	Sand Light Weight	3000	Hilti Kwik Bolt TZ2	ESR-4266	2"	N/A	N/A	See Detail "A"	30 FT-LB	N/A
1/2"	Normal Weight	3000	Hilti Kwik Bolt TZ2	ESR-4266	2.5"	3"	24"	5"	50 FT-LB	1940 lb
1/2"	Normal Weight	3000	Hilti Kwik Bolt TZ2	ESR-4266	3.25"	3"	24"	6"	50 FT-LB	2174 lb

- B. THIS PREAPPROVAL ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, 24" 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.

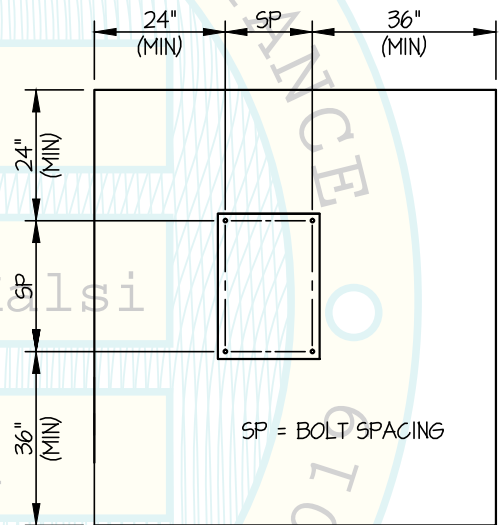
- (ii) ACCEPTANCE CRITERIA:

- 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.



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.



STRYKER

DES. J. ROBERSON

SHEET

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STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

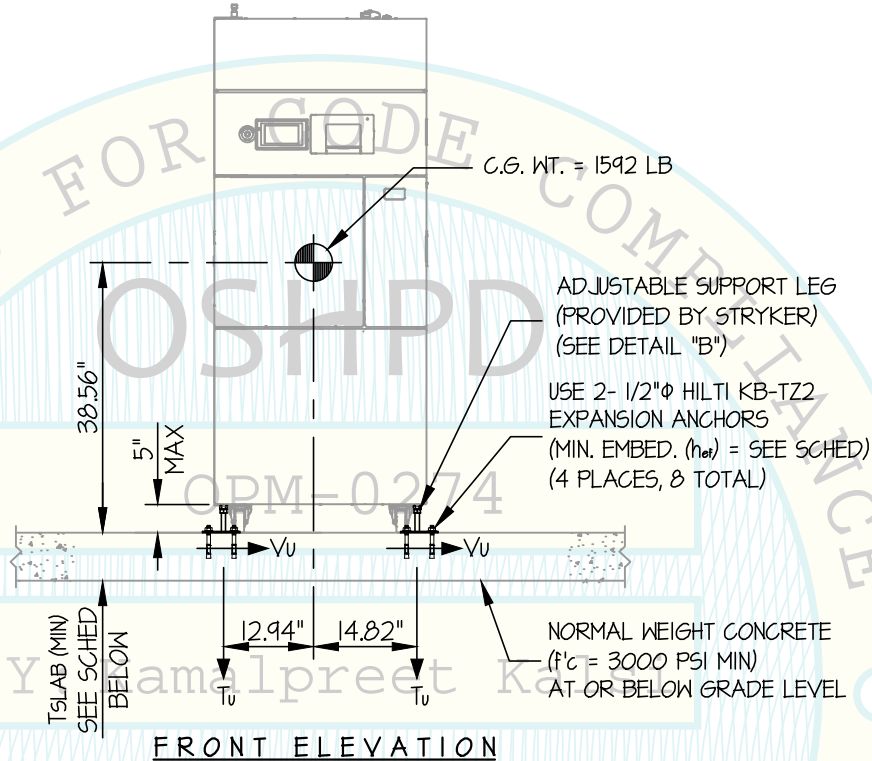
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OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB



ANCHORS

MAX Sds	TYPE	DIAM	EFF EMBED	QTY	TSLAB	* T_u (lb)	* V_u (lb)
190	HILTI KB-TZ2	1/2"	2.5"	8	5"	1385	494
210	HILTI KB-TZ2	1/2"	3.25"	8	6"	1558	546

* VALUES INCLUDE Ω_o

NOTES:

- FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16. STRENGTH DESIGN IS USED. ($\alpha_p = 10$, $l_p = 15$, $R_p = 15$, $\Omega_o = 2.0$, $z/h \leq 1$)
- CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 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.
- SEE GENERAL NOTES: SHEET 1 AND 2



STRYKER

STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

DES. J. ROBERSON

JOB NO. 11-2105

DATE 7/21/21

SHEET

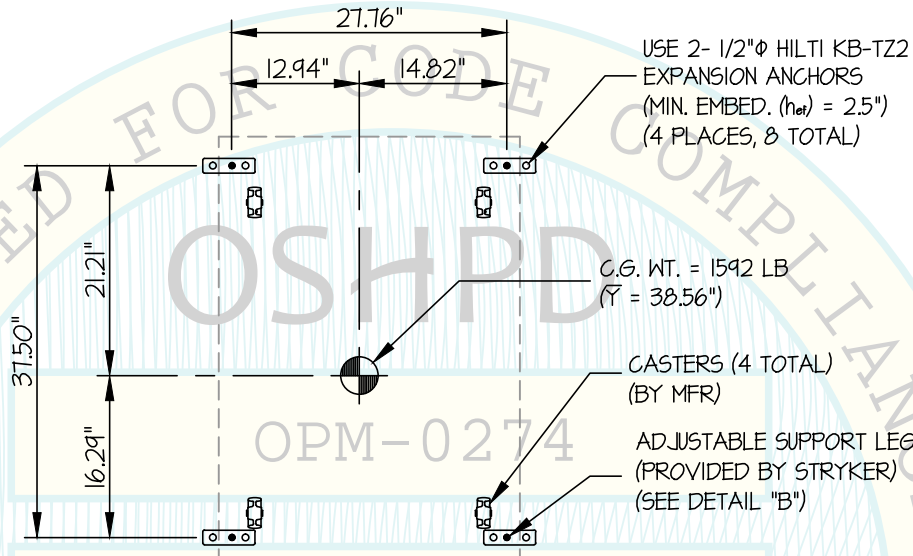
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OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

MAX SDS ≤ 1.90

CONCRETE SLAB



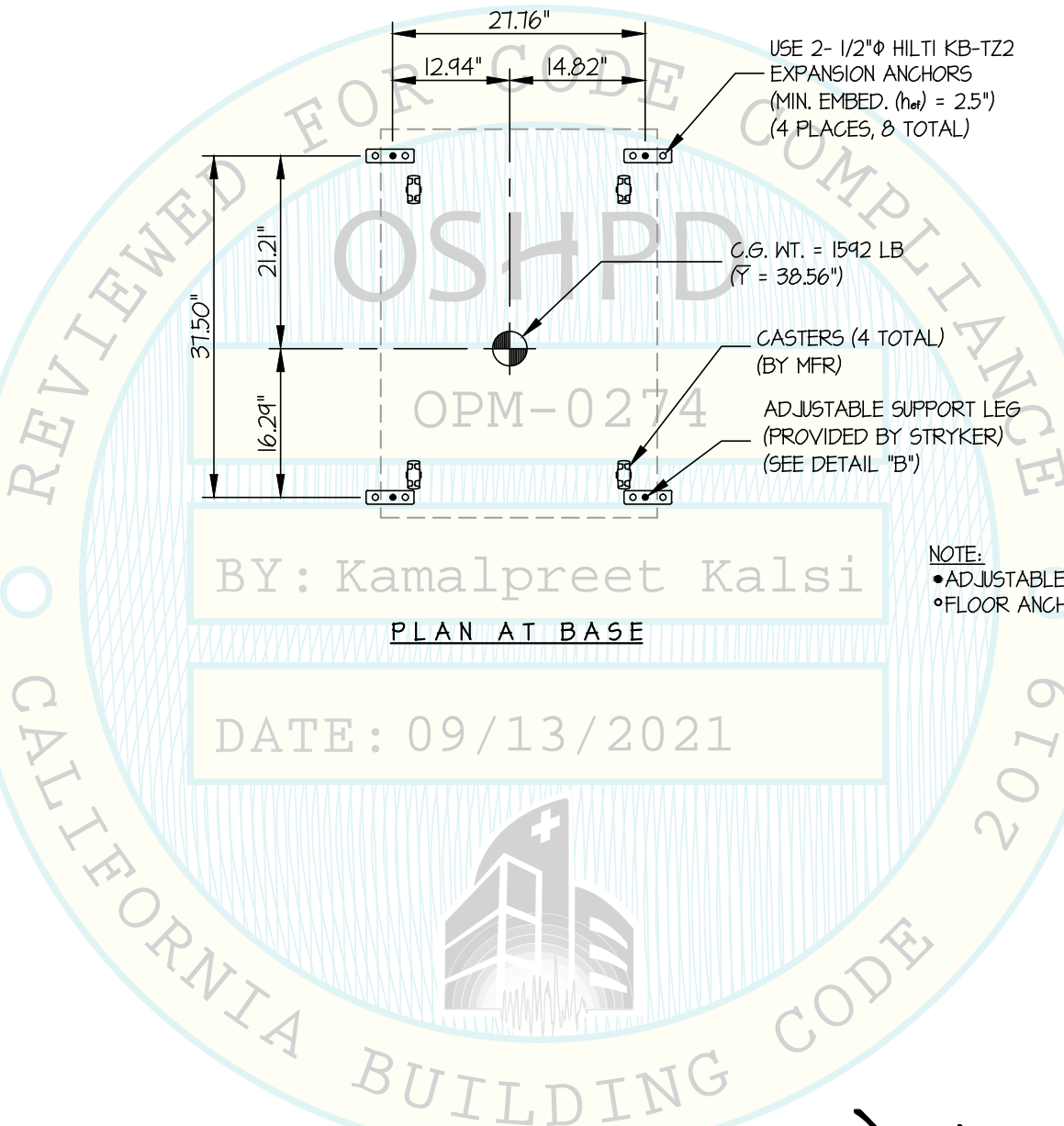
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PLAN AT BASE

DATE: 09/13/2021

NOTE:

- ADJUSTABLE SUPPORT LEG
- FLOOR ANCHOR



STRYKER

DES. **J. ROBERSON**

SHEET

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STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

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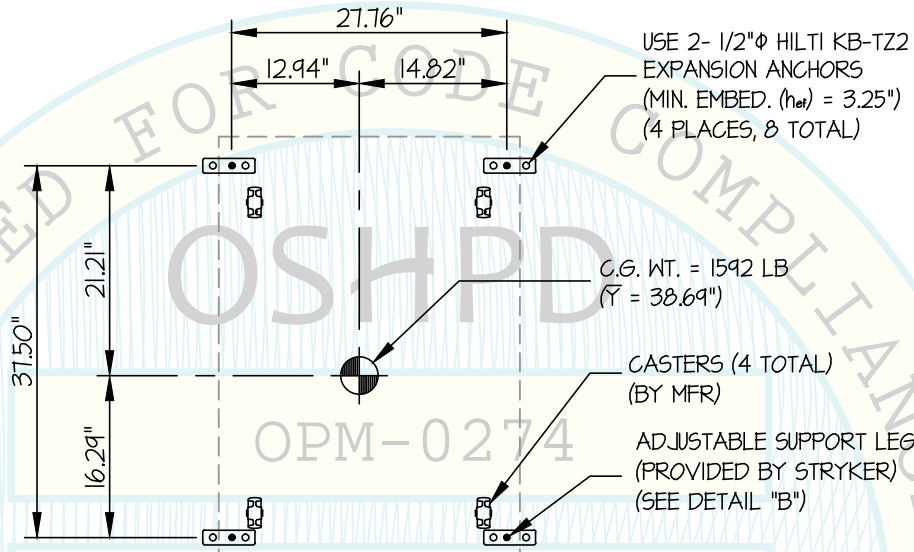
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OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

1.90 < MAX Sps ≤ 2.10

CONCRETE SLAB



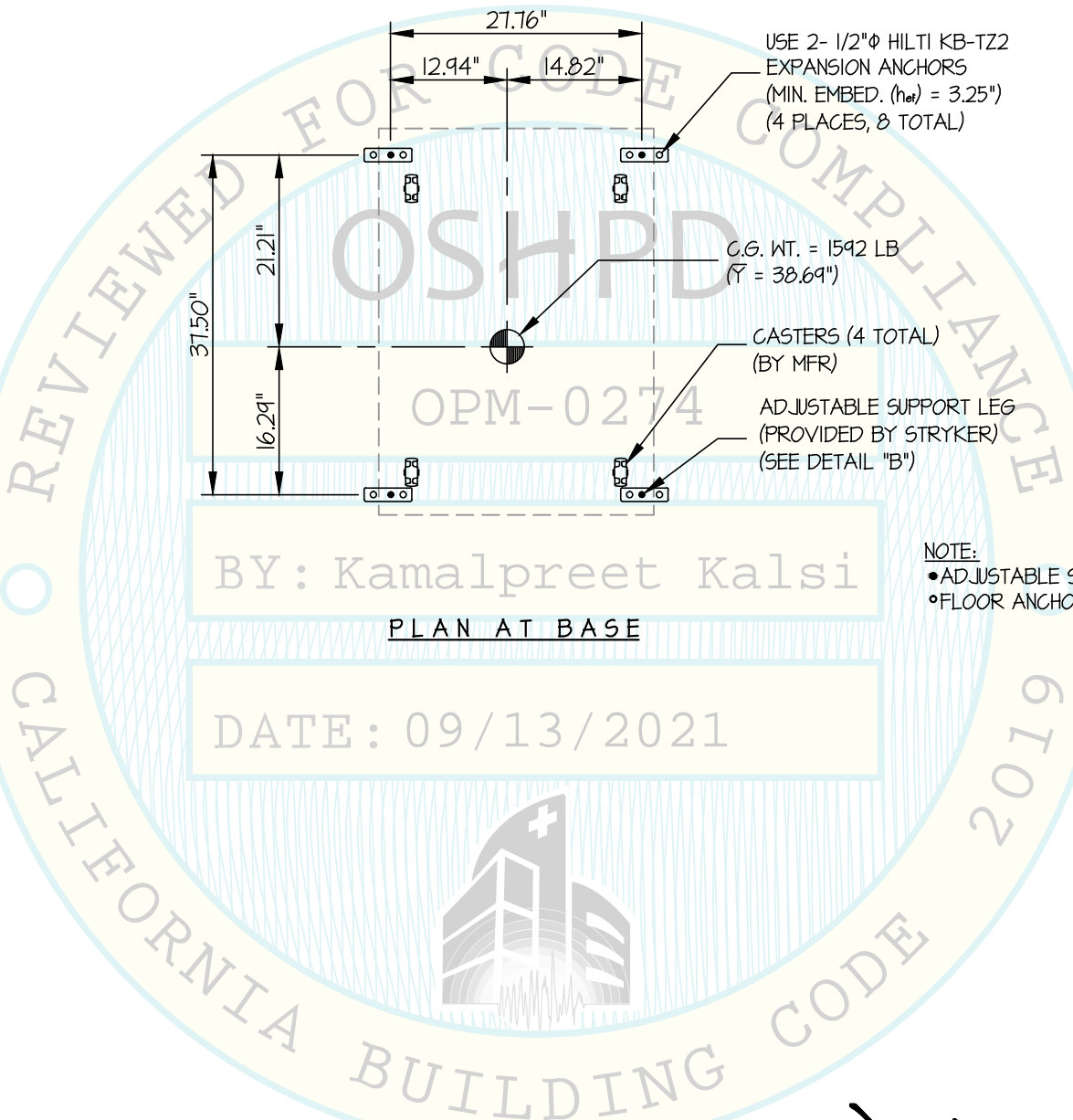
BY: Kamalpreet Kalsi

PLAN AT BASE

DATE: 09/13/2021

NOTE:

- ADJUSTABLE SUPPORT LEG
- FLOOR ANCHOR



STRYKER

DES. J. ROBERSON

SHEET

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STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

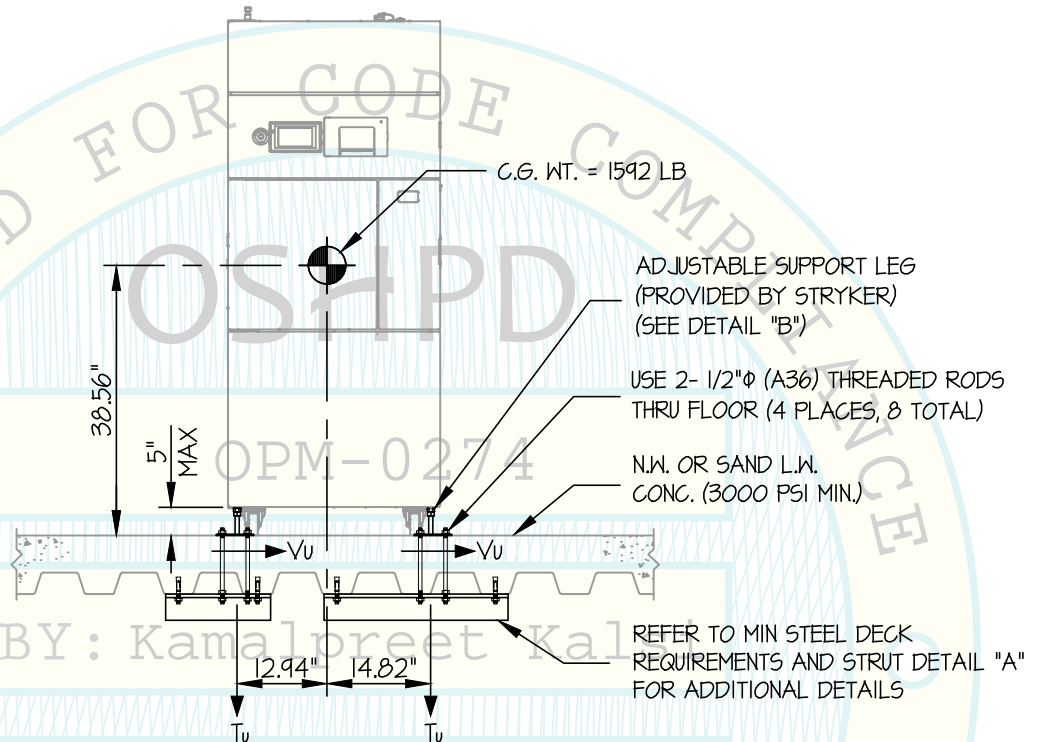
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OF 9 SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



$T_u = 2349$ LB/BOLT (MAX)
 $V_u = 797$ LB/BOLT (MAX)
 (VALUES DO NOT INCLUDE Ω_d)

FRONT ELEVATION

NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.

STRENGTH DESIGN IS USED. ($S_{ds} = 2.30$, $\alpha_p = 1.0$, $I_p = 1.5$, $R_p = 1.5$, $\Omega_e = 2.0$, $z/h \leq 1$)

HORIZONTAL FORCE (E_h) = $2.76 W_p$

HORIZONTAL FORCE (E_{mh}) = $5.52 W_p$ (FOR CONCRETE ANCHORAGE)(SHEAR FORCES ONLY)

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: SHEET 1 AND 2



STRYKER

DES. **J. ROBERSON**

SHEET

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**STERIZONE® VP4 Sterilizer &
STERIZONE® 125L+ Sterilizer**

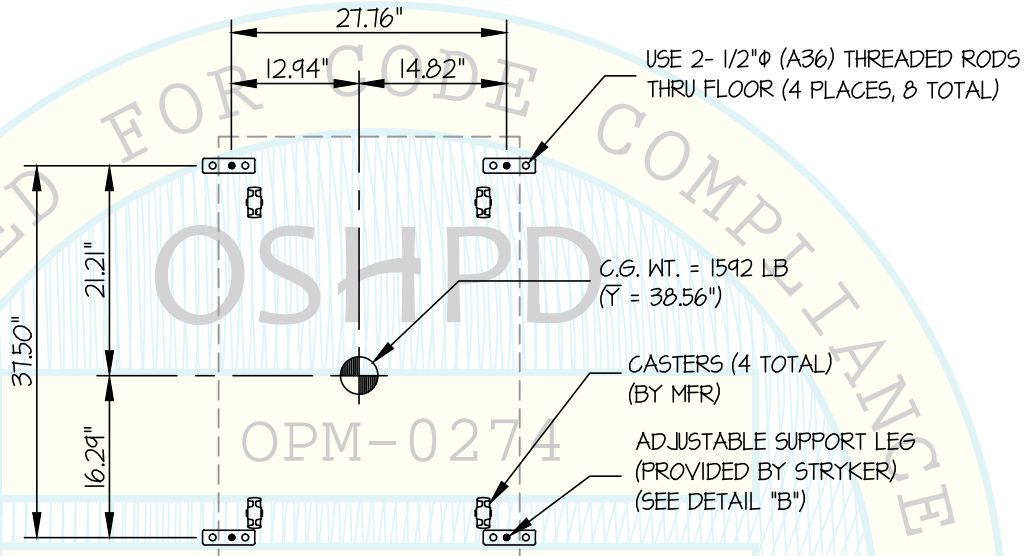
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OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE SLAB ON METAL DECK



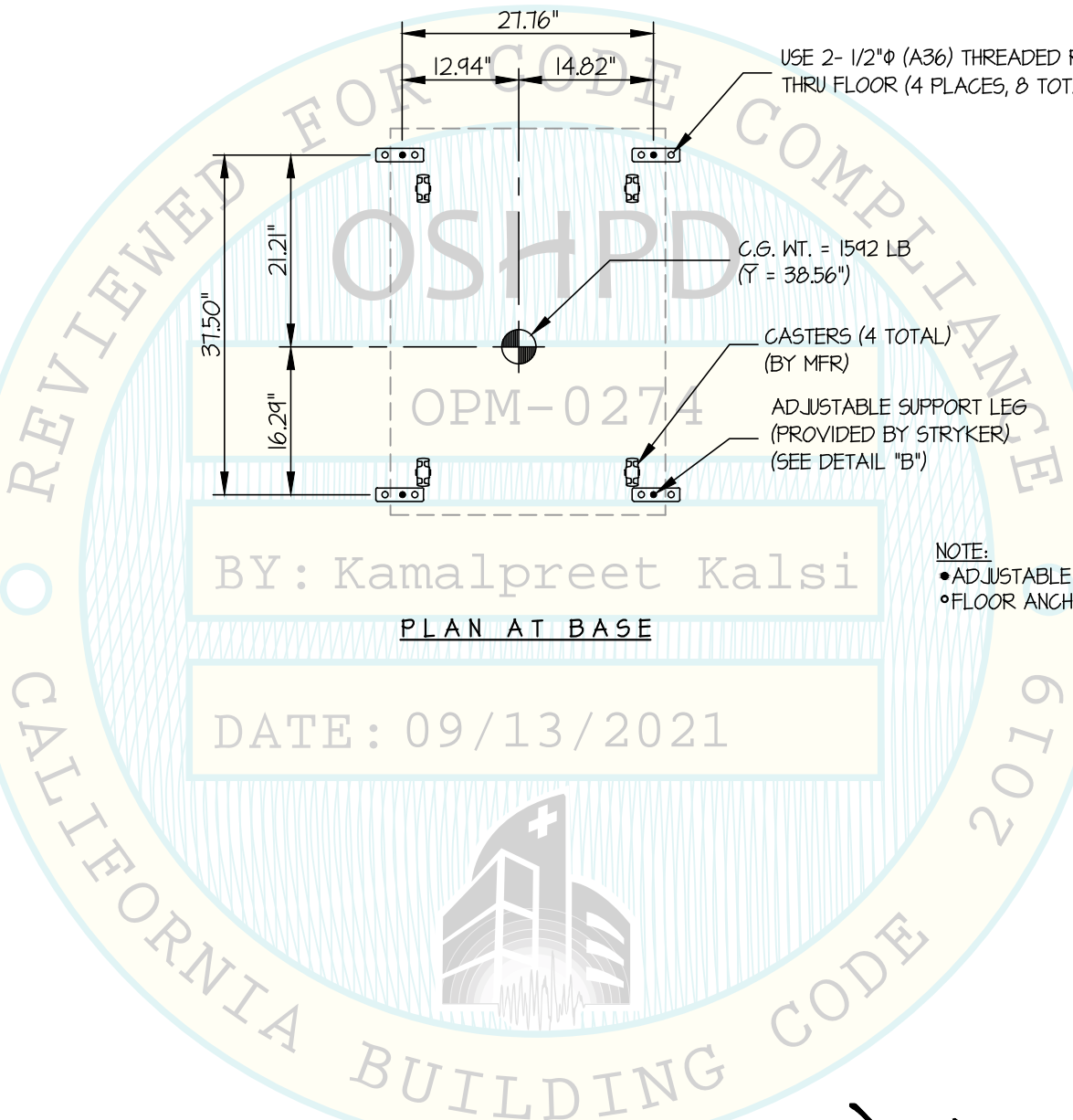
BY: Kamalpreet Kalsi

PLAN AT BASE

DATE: 09/13/2021

NOTE:

- ADJUSTABLE SUPPORT LEG
- FLOOR ANCHOR



STRYKER

STERIZONE® VP4 Sterilizer & STERIZONE® 125L+ Sterilizer

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JOB NO. 11-2105

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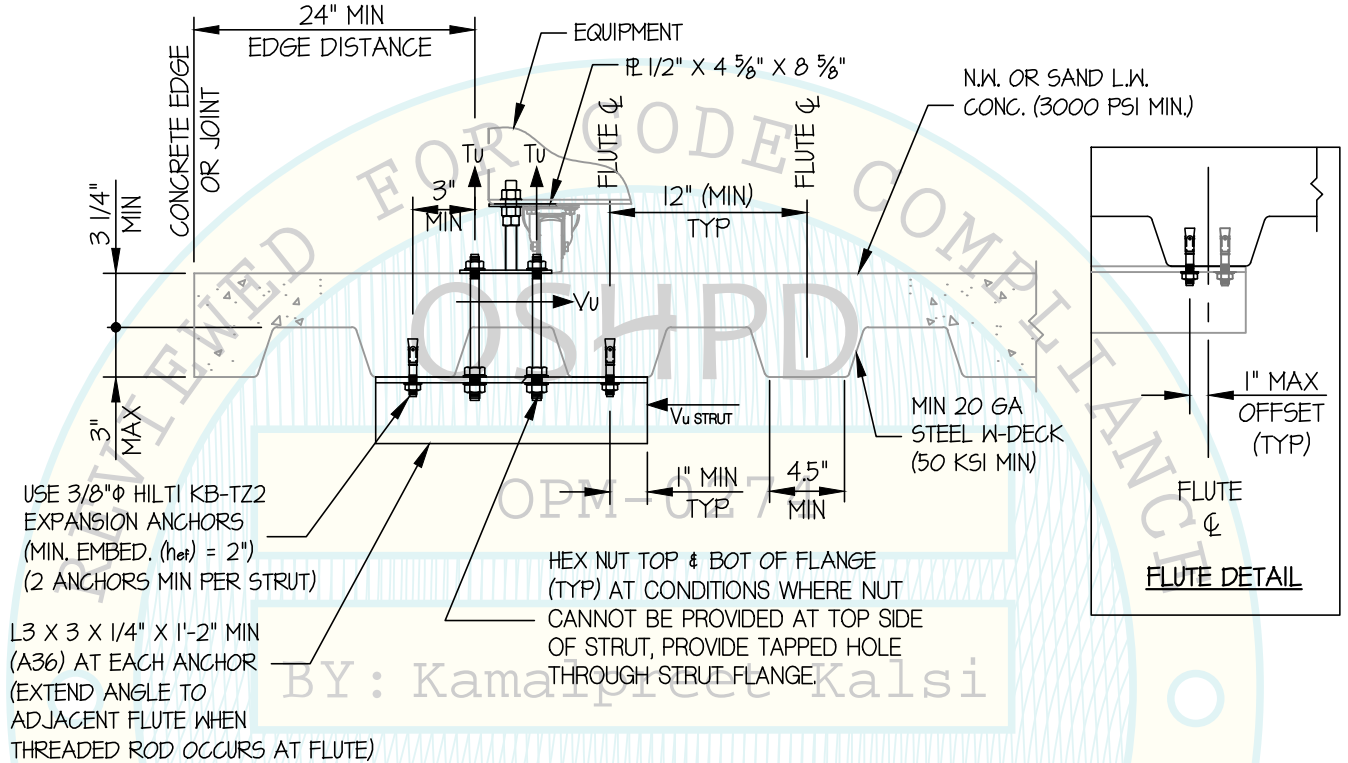
SHEET

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OF 9 SHEETS

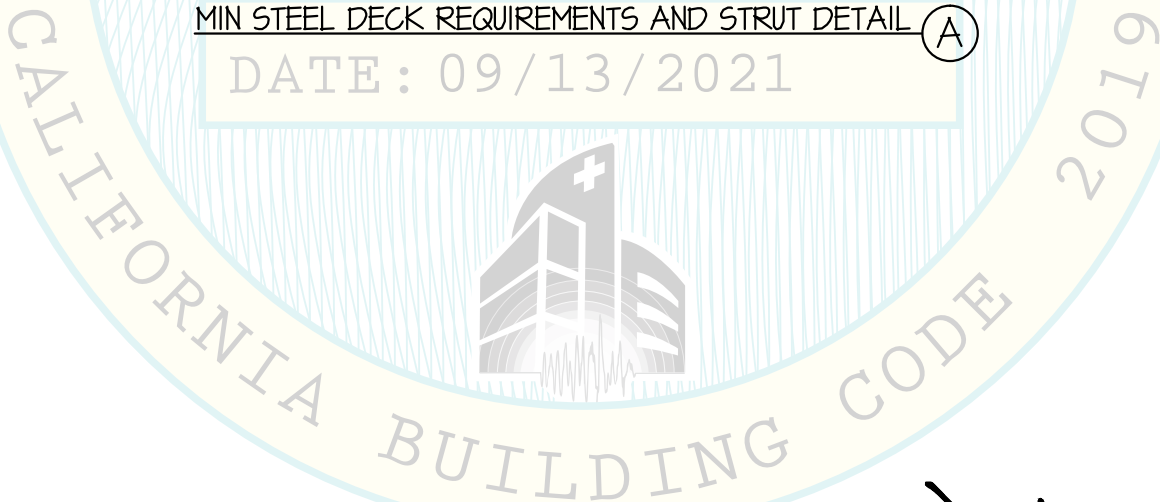
SEISMIC SUPPORTS & ATTACHMENTS

CONCRETE DETAIL



MIN STEEL DECK REQUIREMENTS AND STRUT DETAIL (A)

DATE: 09/13/2021



Jonathan Roberson

REGISTERED PROFESSIONAL ENGINEER
JONATHAN ROBERSON
No. 4197
EXP. 6-30-2022
7/21/21
STRUCTURAL
STATE OF CALIFORNIA

STRYKER

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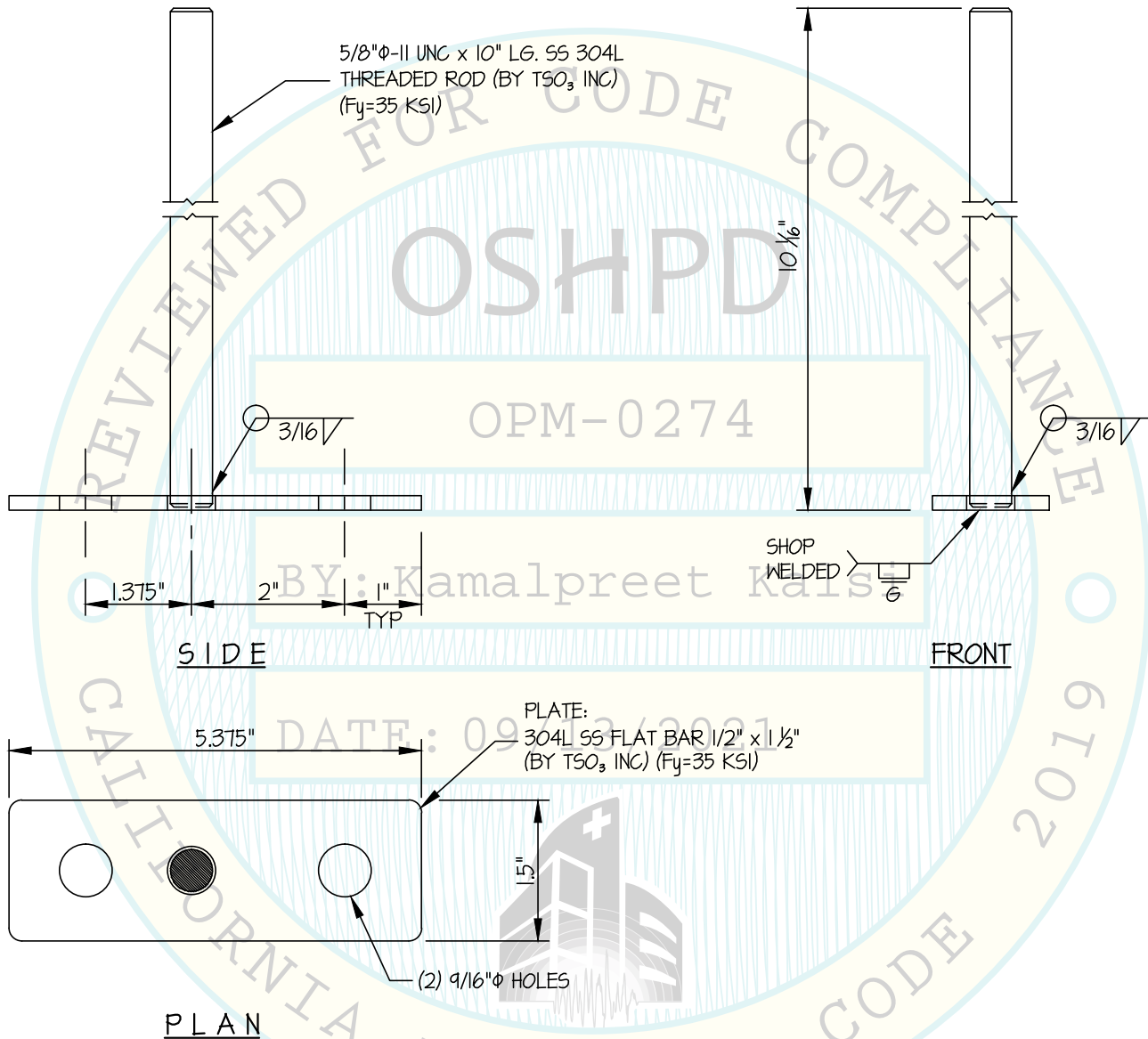
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OF **9** SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

BRACKET DETAIL



BRACKET DETAIL (B)

