



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0575

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal/Update

Manufacturer Information

Manufacturer: Grifols Diagnostic Solutions

Manufacturer's Technical Representative: Antonio Perez

Mailing Address: 4560 Horton Street, Emeryville, CA 94608

Telephone: (510) 923-5047 Email: antonio.perez@grifols.com

Product Information

Product Name: Medical Analyzer

Product Type: Blood Analyzer for Immunohematology Testing

Product Model Number: Erytra Eflexis on Steel Support Bench

General Description: Instrument for performing pre-transfusion compatibility tests

Applicant Information

Applicant Company Name: Grifols Diagnostic Solutions

Contact Person: Antonio Perez

Mailing Address: 4560 Horton Street, Emeryville, CA 94608

Telephone: (510) 923-5047 Email: antonio.perez@grifols.com

Title: Manager, Assay Escalation Support (DxCTS)

Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic 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: CYS STRUCTURAL ENGINEERS, INC.
Name: Dieter Siebald California License Number: S4346
Mailing Address: 2495 Natomas Park Drive, Suite 650, Sacramento, CA 95833
Telephone: (916) 920-2020 Email: dieters@cyseng.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

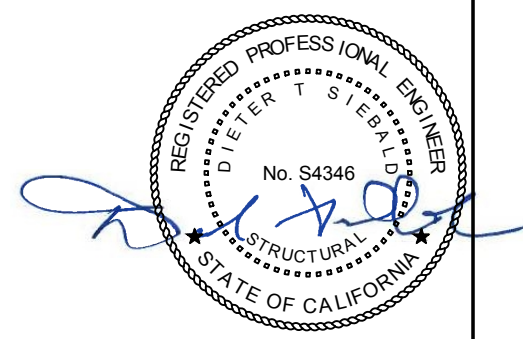
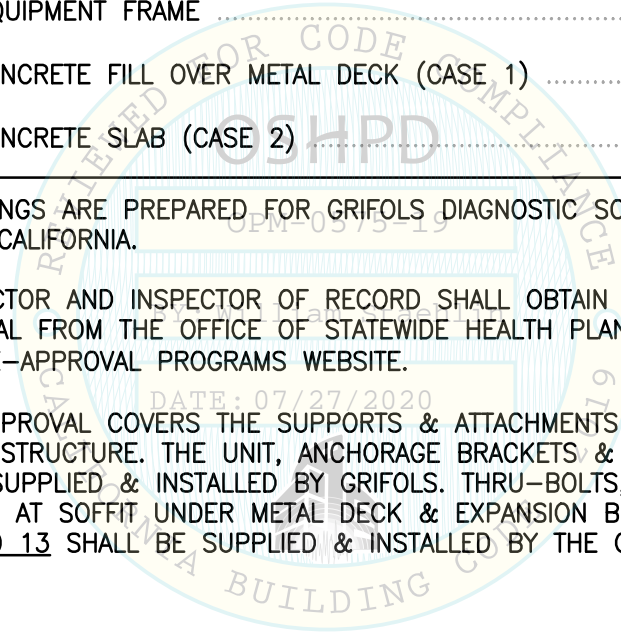
Date: 7/27/2020
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable): _____



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OPM-0575

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- NOTES:**
1. THESE DRAWINGS ARE PREPARED FOR GRIFOLS DIAGNOSTIC SOLUTIONS, INC., EMERYVILLE, CALIFORNIA.
 2. THE CONTRACTOR AND INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT (OSHPD) PRE-APPROVAL PROGRAMS WEBSITE.
 3. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE UNIT TO THE SUPPORTING STRUCTURE. THE UNIT, ANCHORAGE BRACKETS & CONNECTION HARDWARE TO UNIT IS SUPPLIED & INSTALLED BY GRIFOLS. THRU-BOLTS, STRUT HARDWARE & ATTACHMENTS AT SOFFIT UNDER METAL DECK & EXPANSION BOLTS SHOWN ON PAGES 10 TO 13 SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.



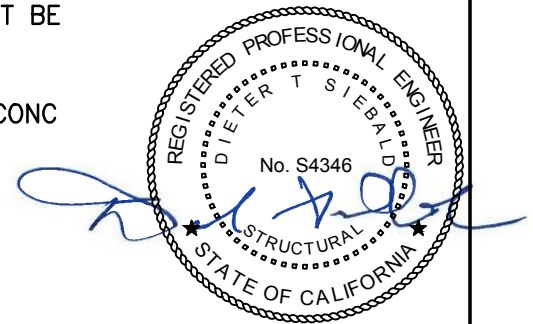
SHEET TITLE: TABLE OF CONTENTS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 20006 Date: 07/24/2020 Page: 1 of 13
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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2019.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - A. THE ADEQUACY OF THE NEW OR (E) STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EACH EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
 - B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
 - C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR (E) ANCHORS. THE SPACING SHOWN IN THE TEST LOADS TABLE ON PAGE 3 IS THE REQUIRED MIN SPACING OF THE GIVEN DIA ANCHORS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIA & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2019 & W/ THE DTLS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DTLS, & THE MATERIAL & GA OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
 - F. THAT THE CONC SLAB TO WHICH THE EQUIP IS ANCHORED SHALL MEET THE REQUIREMENTS OF THE APPLICABLE ICC REPORT & THIS OPM.
3. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STL HILTI KB-TZ EXPANSION ANCHORS COMPLYING W/ ESR-1917 REVISED JANUARY 2020.
 - A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLE ON PAGE 3. PROVIDE FULL THRD ENGAGEMENT FOR NUT & WASHER.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR & REPORT OF TEST RESULTS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD, OWNER & ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. IF ANY ANCHOR FAILS THE TEST, TEST ALL ANCHORS. THE TEST SHALL BE PERFORMED 24 HOURS OR MORE AFTER INSTALLATION. TESTING MAY BE DONE PRIOR TO EQUIP INSTALLATION, HOWEVER, THE NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO, REFER TO 2019 CBC 1910.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLIES FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED W/IN THE FOLLOWING LIMITS: WEDGE TYPE:
ONE-HALF (1/2) TURN OF THE NUT.
 - D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.



SHEET TITLE: GENERAL NOTES



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GENERAL NOTES CONTINUED:

3E. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE, SEE TABLE BELOW.

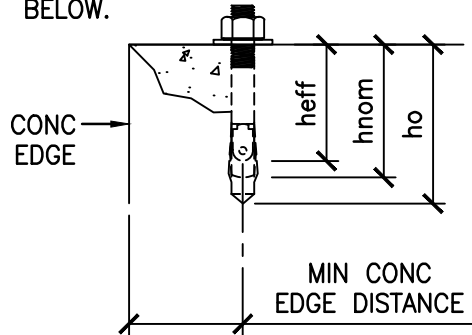


TABLE 1

CONDITION OF ANCHORAGE	ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h _{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD TORQUE (FT-LBS)
CASE 2	3/8	2 5/16	2	2 5/8	4	12	4	25

4. BOLTS THROUGH CONC ON MTL DECK:

- A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED, UNO. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
- B. THRU-BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
- C. THRU-BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS. THRU-BOLTS W/ STL TO STL CONNECTION IN TENSION DO NOT REQUIRE TESTING.

5. SCREW ANCHORS TO BOTT OF CONC FILL OVER MTL DECK:

- A. HILTI KH-EZ (ICC ESR-3027) TENSION TEST LOAD FOR CASE 1.

TABLE 2

ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h _{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	MAX INSTALLATION TORQUE (FT-LBS)
1/4	1 5/8	1.18	2	3/4	1 1/4*	10*	18

* SEE PG 12 IN THIS OPM & FOOTNOTE 2, TABLE 2 IN ESR-3027



SHEET TITLE: GENERAL NOTES (CONTINUED)



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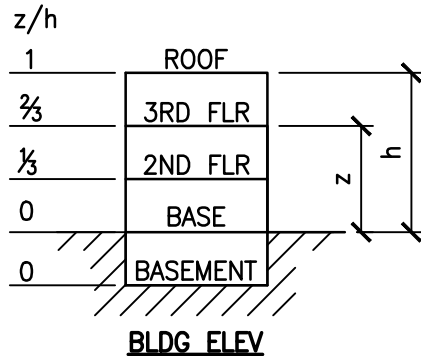
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GENERAL NOTES CONTINUED:

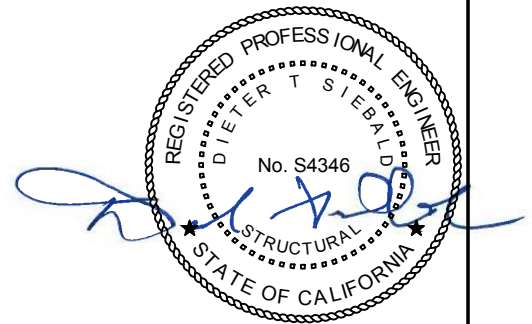
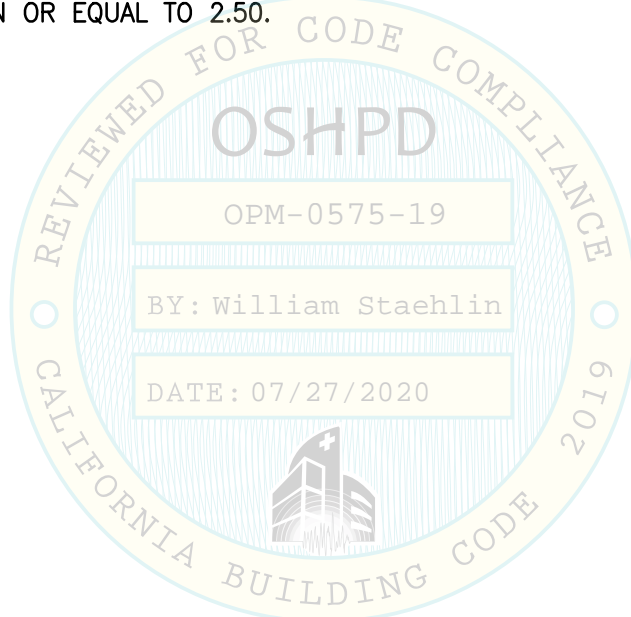
6. TWO (2) CASES OF ATTACHMENT ARE SPECIFIED & PRESENTED IN THIS PRE-APPROVAL:



CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 1$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN $3\frac{1}{4}$ " SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK ($f'c = 3000$ PSI, MIN). ANCHORS SHALL BE A36 STL THRD ROD THRU CONC FILL & MTL DECK.

CASE 2: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG ($z/h=0$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB ($f'c = 3000$ PSI, MIN).

7. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQUAL TO 2.50.



SHEET TITLE: GENERAL NOTES (CONTINUED)



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ABBREVIATIONS:

⊙	AT	LBS	POUNDS
ABV	ABOVE	LLH	LONG LEG HORIZONTAL
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	LLV	LONG LEG VERTICAL
BLDG	BUILDING	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
BLW	BELOW	MAX	MAXIMUM
CBC	CALIFORNIA BUILDING CODE	MFR	MANUFACTURER
CG	CENTER OF GRAVITY	MIN	MINIMUM
⊕	CENTERLINE	MTL	METAL
CONC	CONCRETE	NO. (#)	NUMBER OR POUNDS
COORD	COORDINATE	NWC	NORMAL WEIGHT CONCRETE
DBL	DOUBLE	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
DIA (ϕ)	DIAMETER	PSI	POUNDS PER SQUARE INCH
(E)	EXISTING CONDITION	SEOR	STRUCTURAL ENGINEER OF RECORD
ELEV	ELEVATION	SLWC	SAND-LIGHTWEIGHT CONCRETE
EQUIP	EQUIPMENT	SS	STAINLESS STEEL
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	STD	STANDARD
FLR	FLOOR	STL	STEEL
FT (')	FOOT/FEET	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL	THRD	THREAD OR THREADED
GA	GAUGE	TYP	TYPICAL
IN (")	INCH	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
KSI	KIPS PER SQUARE INCH	W/	WITH
		Wp	OPERATING WEIGHT
		WT	WEIGHT

DESIGN CRITERIA

SUPPORT & ATTACHMENT DESIGN IS PER 2019 CBC AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-16 INCLUDING SUPPLEMENT #1 & ERRATA:

$$a_p = 1.0 \quad R_p = 1.5 \quad I_p = 1.5 \quad \Omega_0 = 1.5 \text{ (CONC ANCHORS)}$$

Wp AS NOTED ON EQUIP DRAWING SHOWN ON PG 6

FOR CASE 1 - UPPER FLRS ABV THE BASE, z/h = 1

$$S_{Ds} = 2.50 \quad F_p = 3.00 W_p$$

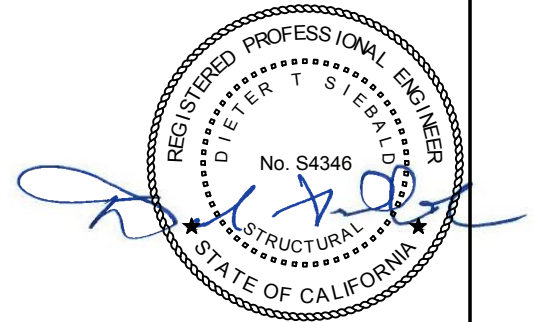
FOR CASE 2 - SLAB AT OR BLW BASE, z/h = 0

$$S_{Ds} = 2.50 \quad F_p = 1.13 W_p$$

LOAD COMBINATIONS

$$(0.9 - 0.2 S_{Ds}) D - \Omega_0 F_p \text{ (FOR MAX TENSION)}$$

$$(1.2 + 0.2 S_{Ds}) D + \Omega_0 F_p \text{ (FOR MAX COMPRESSION)}$$



SHEET TITLE: ABBREVIATIONS & DESIGN CRITERIA



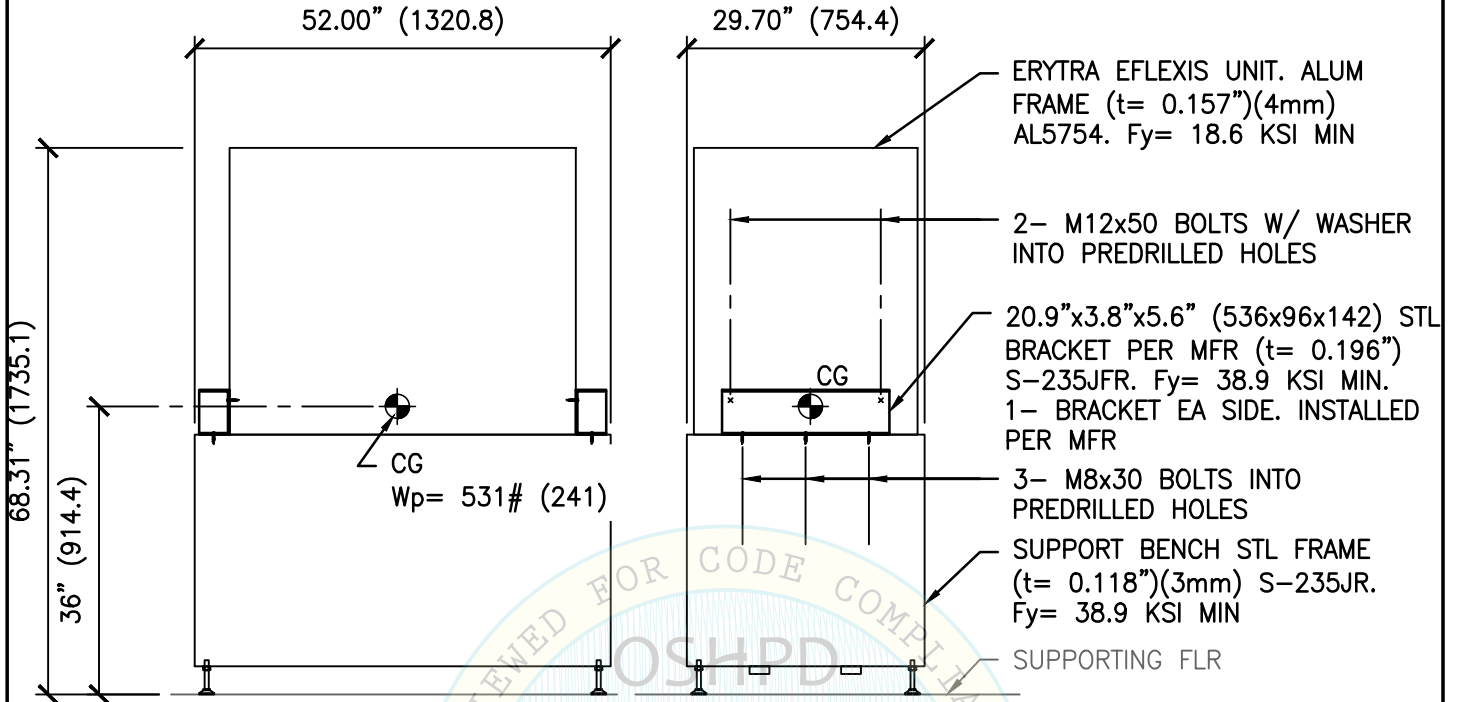
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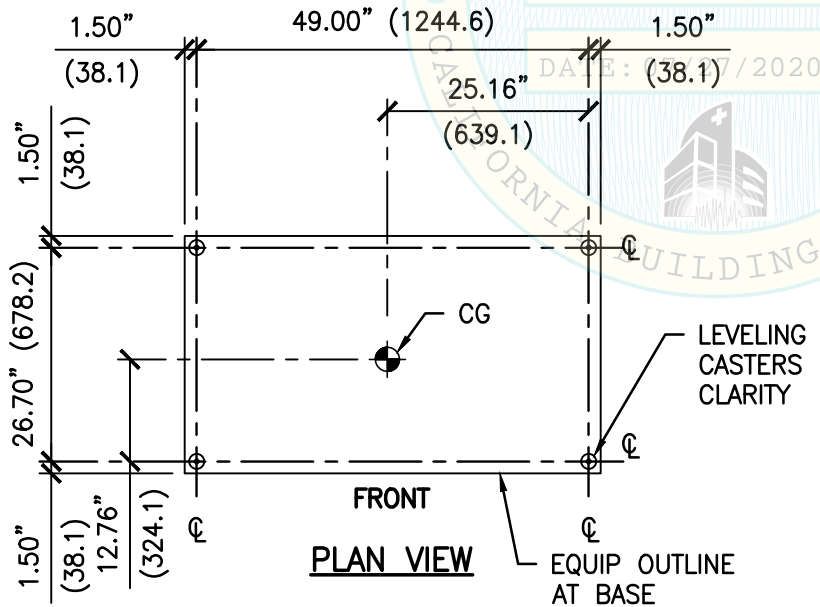
FRONT ELEV

SIDE ELEV

OPM-0575-19

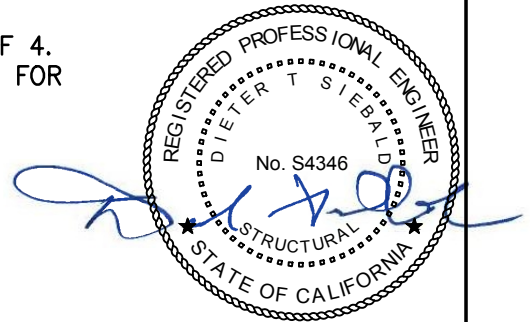
BY: William Staehlin

DATE: 07/27/2020



NOTES:

1. DIMS & WT SHOWN ARE FOR THE COMBINED ERYTRA EFLEXIS UNIT & GRIFOLS BENCH.
2. VALUES IN (E) ARE IN mm OR kg, TYP UNO.



SHEET TITLE: EQUIPMENT DIMENSIONS

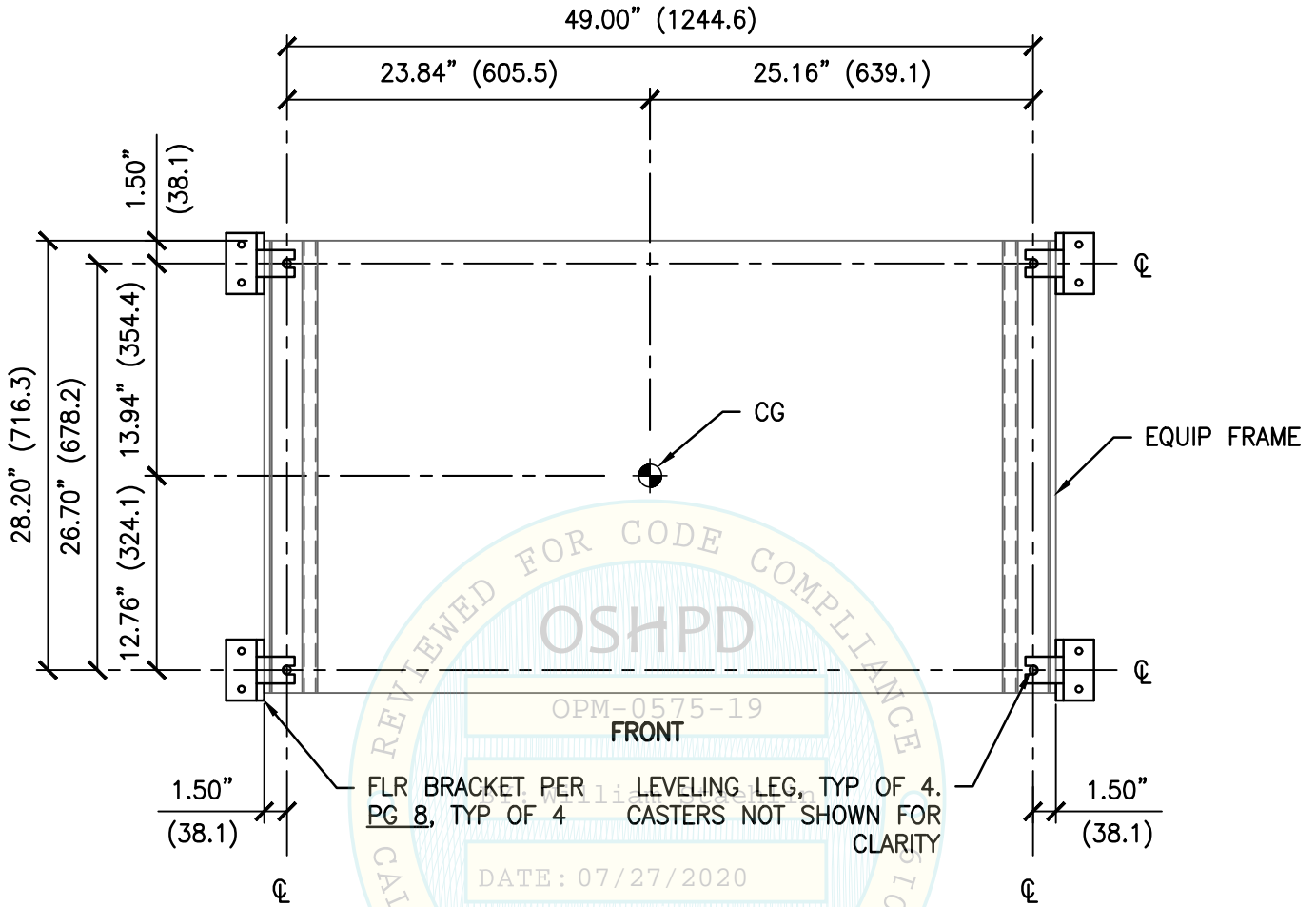


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NOTE:

SEE PG 9 FOR ATTACHMENT DETAILS TO EQUIP FRAME.
SEE PGS 10-13 FOR ANCHORAGE DETAILS TO SUPPORTING FLR.



SHEET TITLE: ANCHORAGE BRACKET LOCATIONS



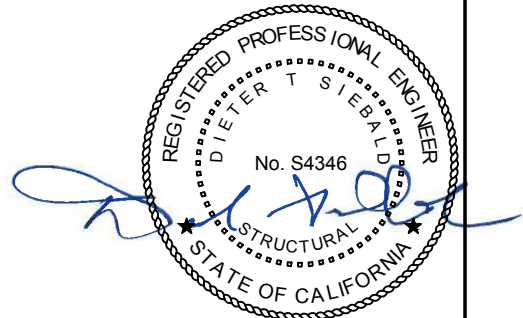
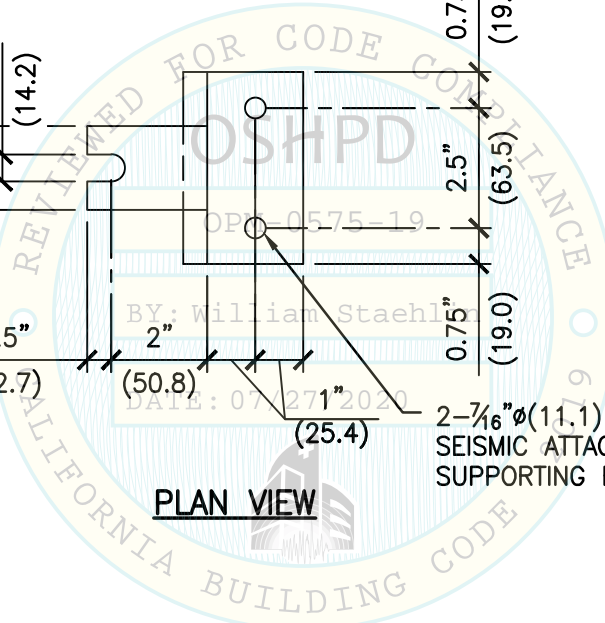
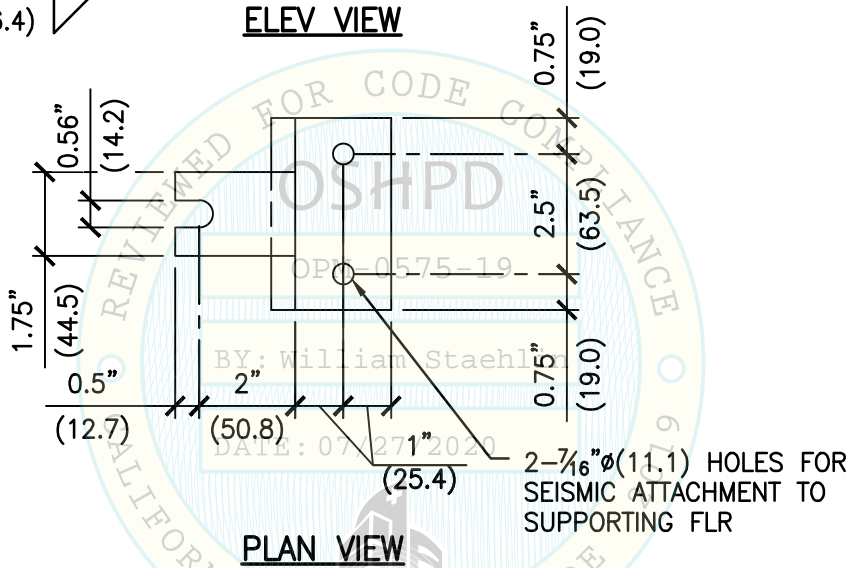
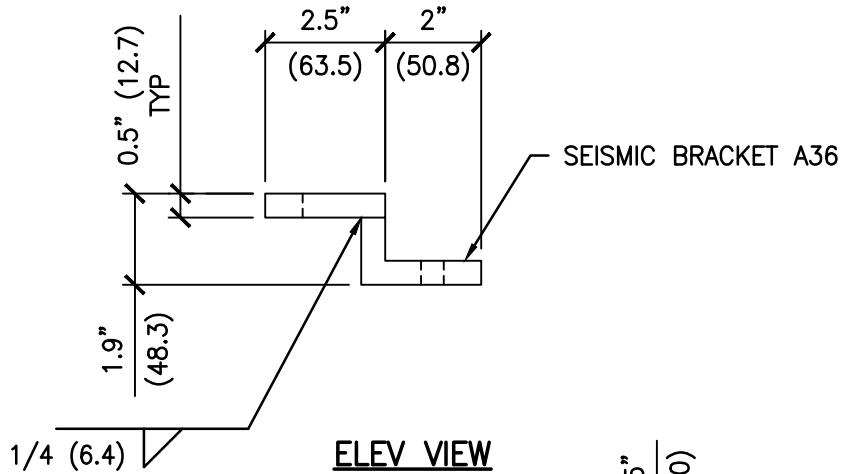
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SHEET TITLE: FLOOR BRACKET DETAIL



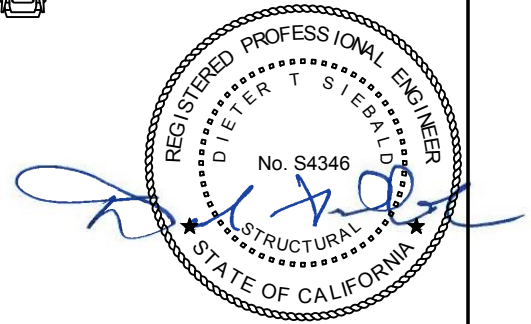
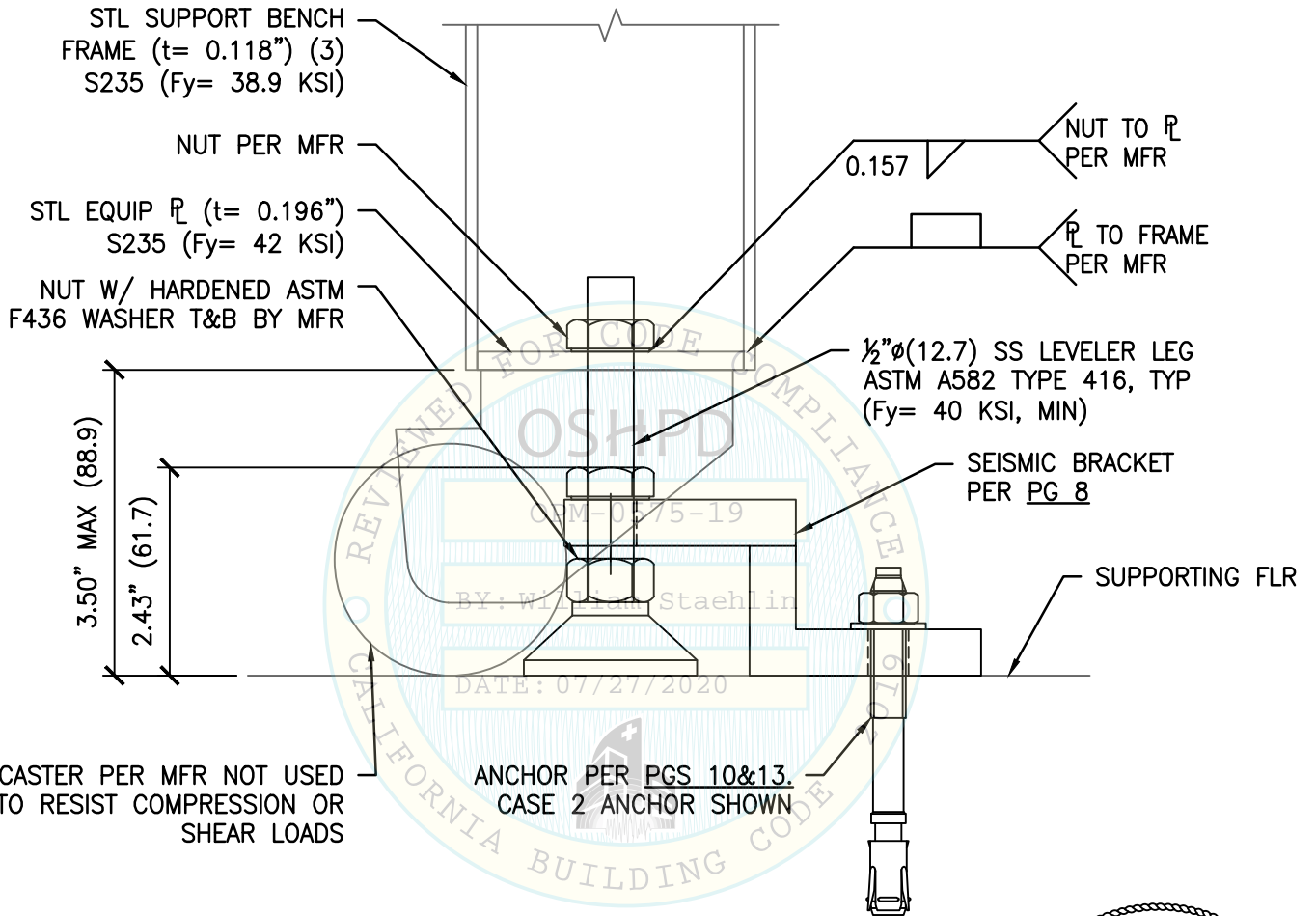
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SHEET TITLE: ATTACHMENT DETAIL TO EQUIPMENT FRAME



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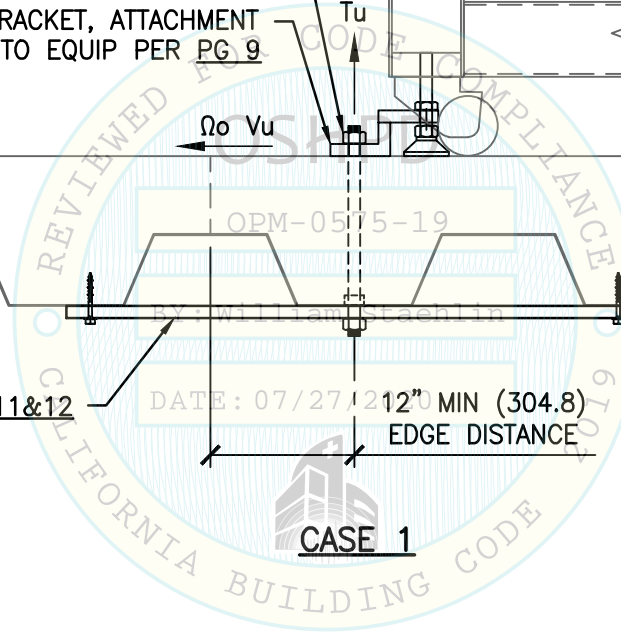
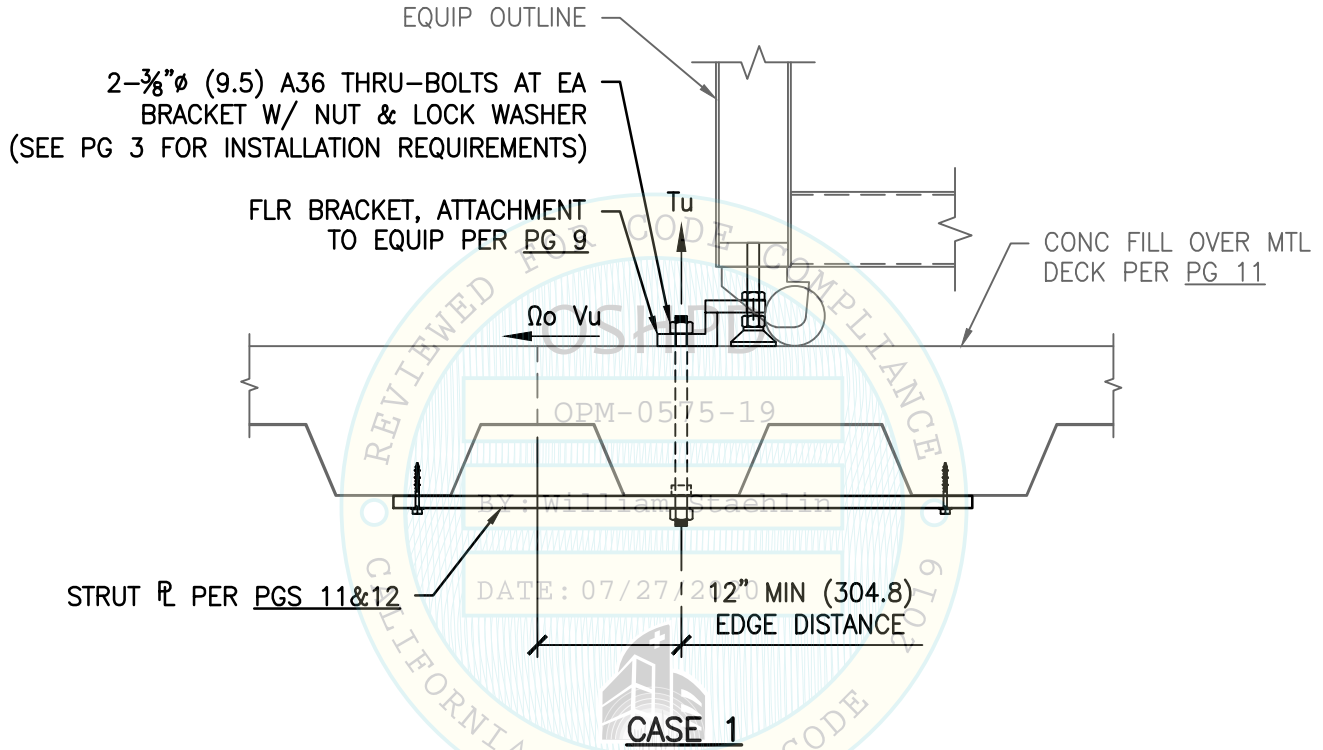
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MAX ANCHOR FORCES
AT LRFD AT EA
BRACKET

	Tu	$\Omega_o Vu$
CASE 1 $z/h \leq 1$	1180# (5249N)	1427# (6348N)

OVERSTRENGTH FACTOR (Ω_o)
INCLUDED WHERE NOTED.

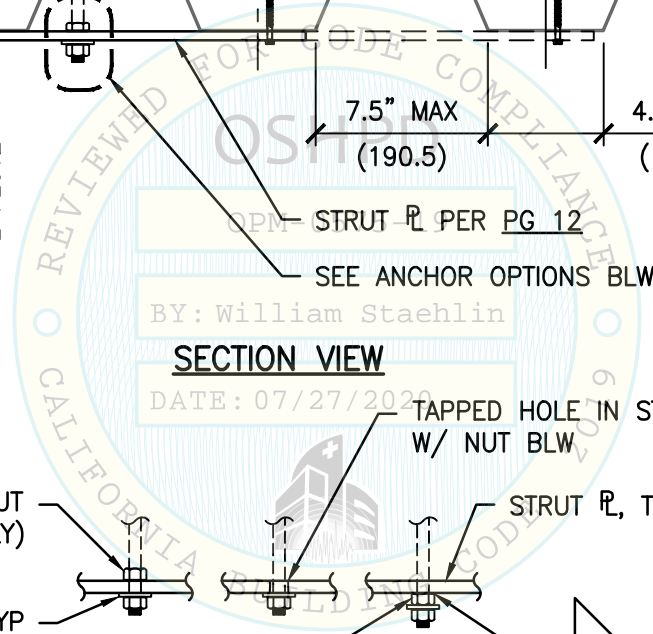
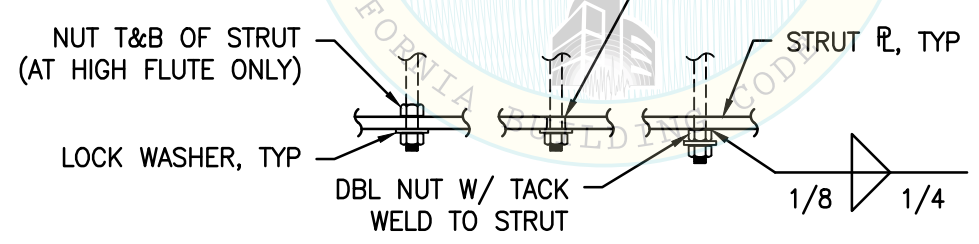
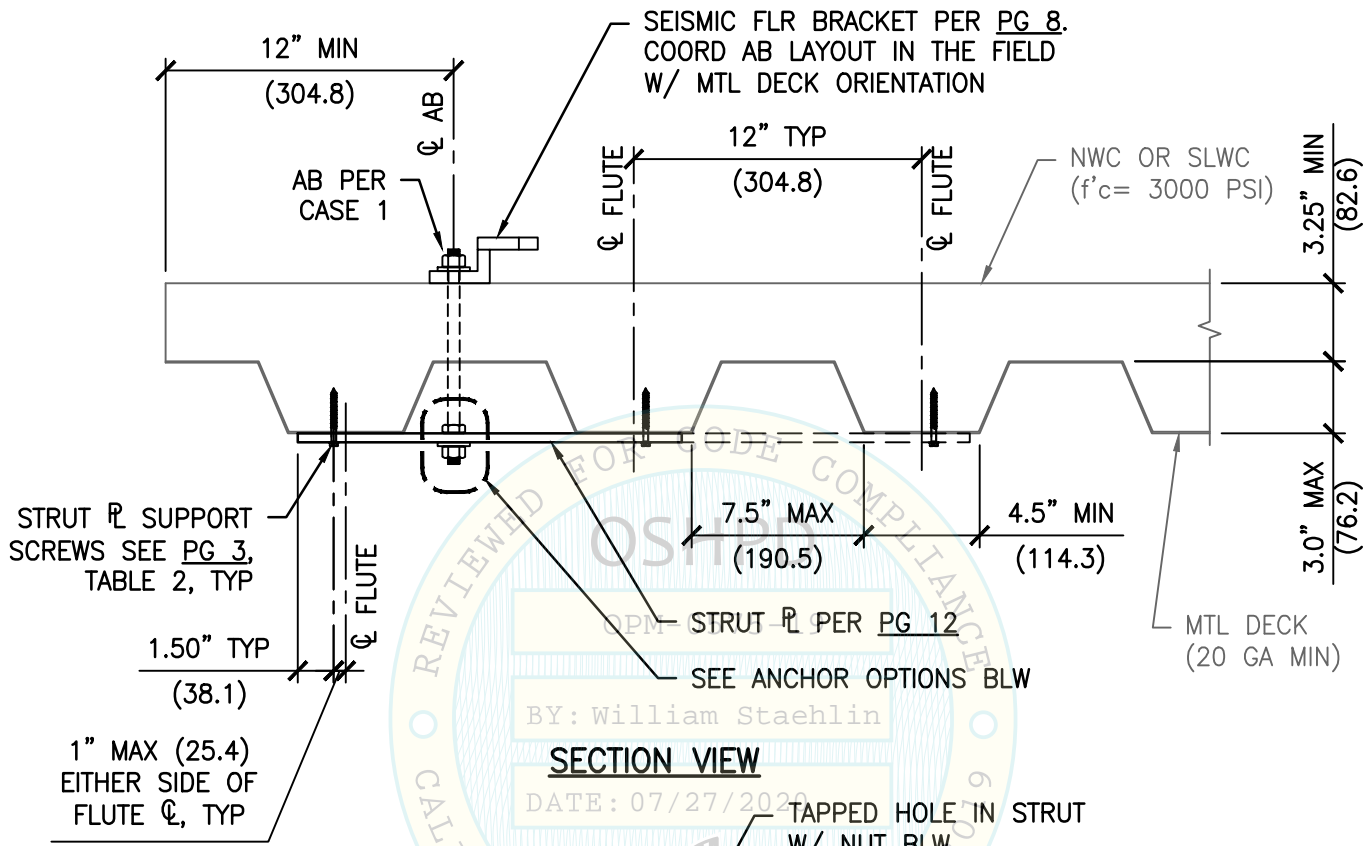


SHEET TITLE: ANCHORAGE DETAIL
TO CONCRETE FILL OVER METAL DECK (CASE 1)


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NOTE:
EQUIP OUTLINE NOT SHOWN
FOR CLARITY

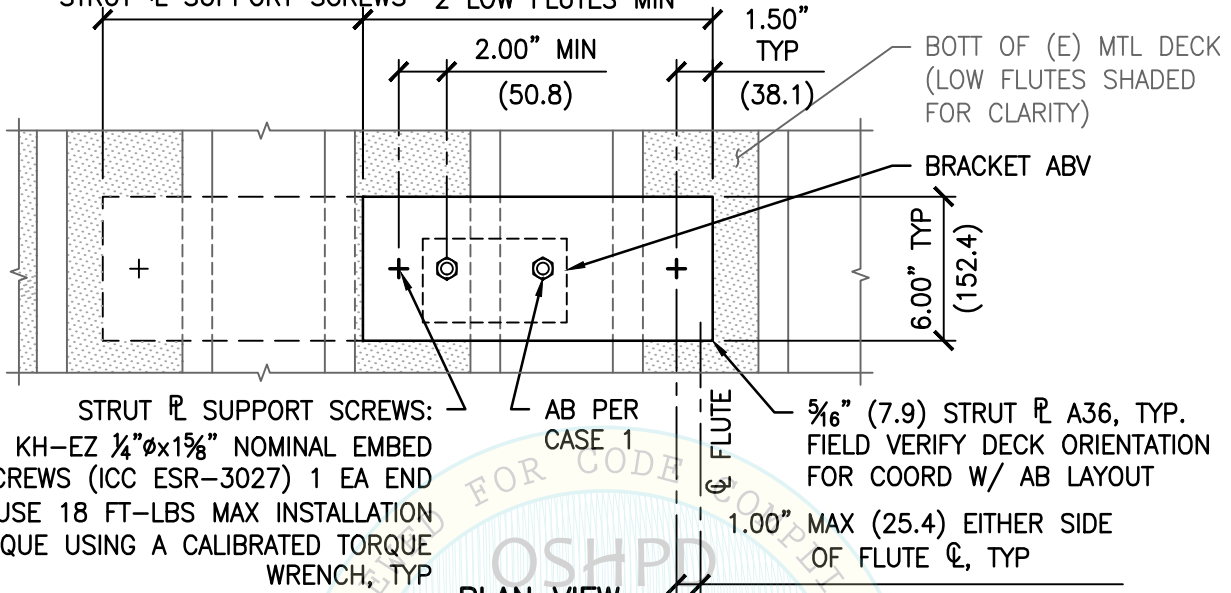


SHEET TITLE: STRUT PLATE DETAIL

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EXTEND STRUT LENGTH TO
NEXT ADJ LOW FLUTE IF AB'S
ARE LESS THAN 2" (50.8) FROM
STRUT \varnothing SUPPORT SCREWS 2 LOW FLUTES MIN



BOTT OF (E) MTL DECK
(LOW FLUTES SHADED
FOR CLARITY)

BRACKET ABV

6.00" TYP
(152.4)

STRUT \varnothing SUPPORT SCREWS:
HILTI KH-EZ $\frac{1}{4}$ " \varnothing x $\frac{1}{8}$ " NOMINAL EMBED
CONC SCREWS (ICC ESR-3027) 1 EA
END OF \varnothing . USE 18 FT-LBS MAX INSTALLATION
TORQUE USING A CALIBRATED TORQUE
WRENCH, TYP

AB PER
CASE 1

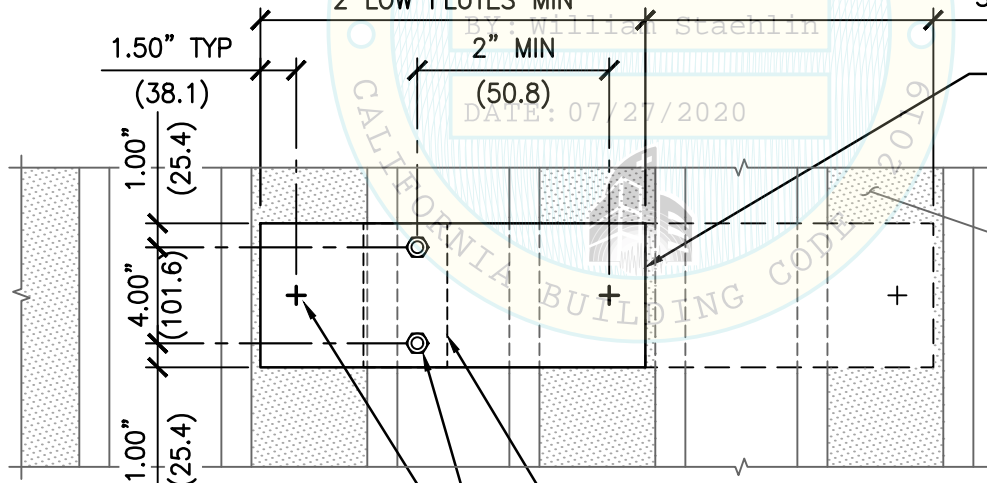
$\frac{5}{16}$ " (7.9) STRUT \varnothing A36, TYP.
FIELD VERIFY DECK ORIENTATION
FOR COORD W/ AB LAYOUT

1.00" MAX (25.4) EITHER SIDE
OF FLUTE \varnothing , TYP

PLAN VIEW

ANCHORS PERPENDICULAR TO FLUTES
LENGTH SHALL ENGAGE
2 LOW FLUTES MIN

EXTEND STRUT LENGTH TO
NEXT ADJ LOW FLUTE IF AB'S
ARE LESS THAN 2" FROM
STRUT \varnothing SUPPORT SCREWS



$\frac{5}{16}$ " (7.9) STRUT \varnothing A36.
FIELD VERIFY DECK
ORIENTATION FOR COORD
W/ AB LAYOUT

BOTT OF MTL DECK
(LOW FLUTES SHADED
FOR CLARITY)

STRUT \varnothing SUPPORT SCREWS:
HILTI KH-EZ $\frac{1}{4}$ " \varnothing x $\frac{1}{8}$ " NOMINAL EMBED
CONC SCREWS (ICC ESR-3027) 1 EA
END OF \varnothing

PLAN VIEW

ANCHORS PARALLEL TO FLUTES

AB PER CASE 1

BRACKET ABV



SHEET TITLE: STRUT PLATE DETAIL



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SACRAMENTO, CA 95833

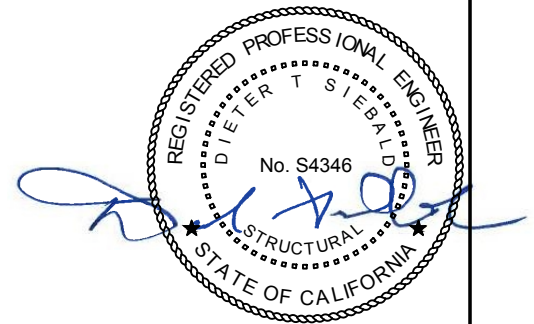
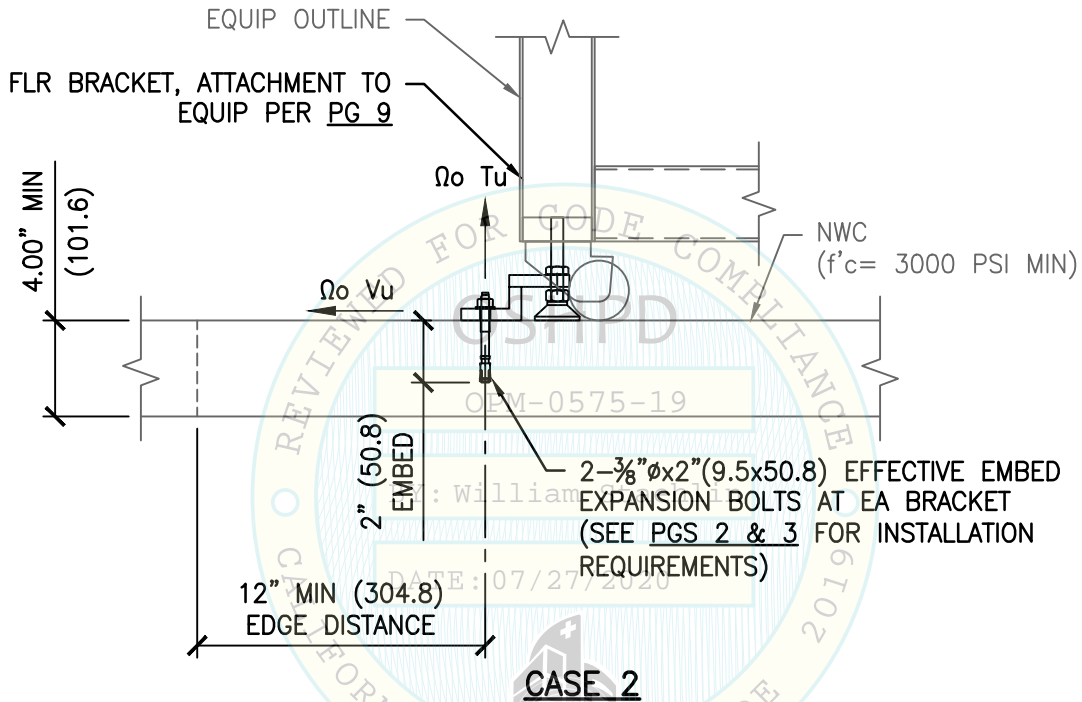
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	MAX ANCHOR FORCES AT LRFD AT EA BRACKET	
	$\Omega_o Tu$	$\Omega_o Vu$
<u>CASE 2</u> $z/h = 0$	619# (2754N)	539# (2398N)

OVERSTRENGTH FACTOR (Ω_o)
INCLUDED WHERE NOTED.



SHEET TITLE: ANCHORAGE DETAIL
TO CONCRETE SLAB (CASE 2)



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