



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0574

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal/Update

Manufacturer Information

Manufacturer: T&O LabSystems GmbH & Co. KG

Manufacturer's Technical Representative: Dirk Meier

Mailing Address: Leibnizstr. 7, Kaltenkirchen, Ge 24568

Telephone: () - Email: dm@to-labsystems.de

Product Information

Product Name: STIM System

Product Type: Sample Tube Input & Identification Module

Product Model Number: STIM Module with 1 to 5 Extension Modules

General Description: Sample Tube Input & Identification Module System

Applicant Information

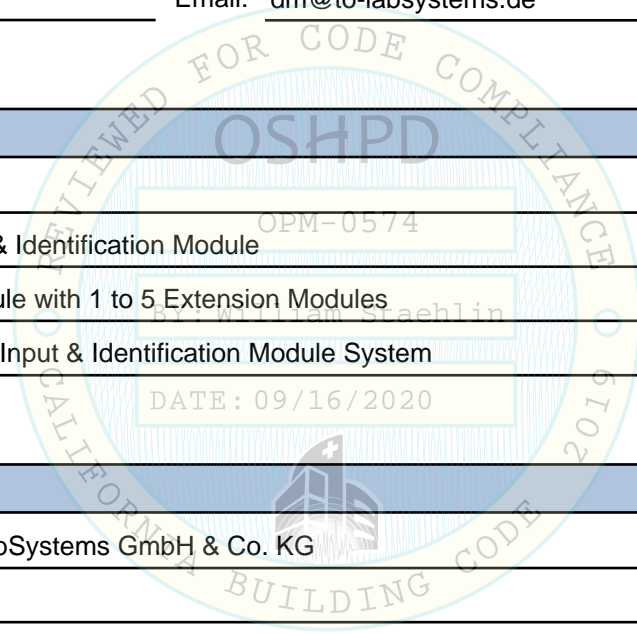
Applicant Company Name: T&O LabSystems GmbH & Co. KG

Contact Person: Dirk Meier

Mailing Address: Leibnizstr. 7, Kaltenkirchen, Ge 24568

Telephone: () - Email: dm@to-labsystems.de

Title: Quality Manager



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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: 9/16/2020
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable): _____



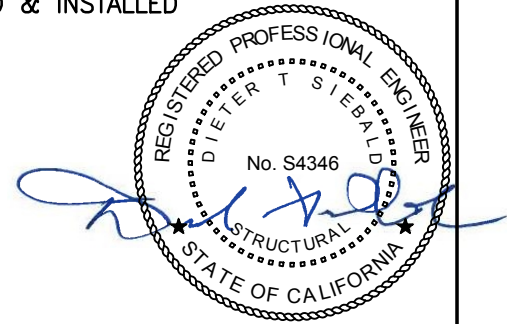
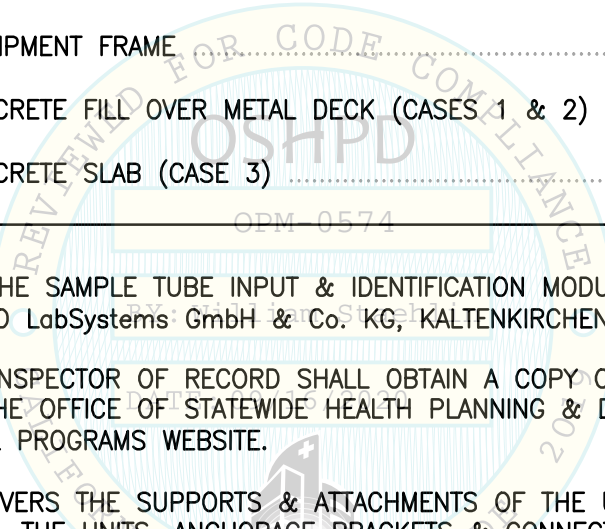


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NOTES:

1. THESE DRAWINGS FOR THE SAMPLE TUBE INPUT & IDENTIFICATION MODULE (STIM) SYSTEM ARE PREPARED FOR T&O LabSystems GmbH & Co. KG, KALTENKIRCHEN, GERMANY.
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 UNITS TO THE SUPPORTING STRUCTURE. THE UNITS, ANCHORAGE BRACKETS & CONNECTION HARDWARE TO UNITS ARE SUPPLIED & INSTALLED BY THE MEDICAL EQUIPMENT VENDORS/INSTALLERS. THRU-BOLTS, STRUT HARDWARE & ATTACHMENTS AT SOFFIT UNDER METAL DECK & EXPANSION BOLTS SHOWN ON PAGES 11 TO 15 SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.



SHEET TITLE: TABLE OF CONTENTS



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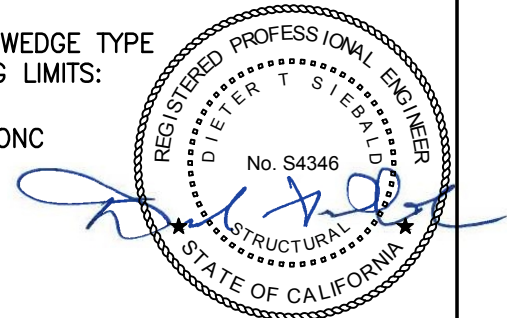
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GENERAL NOTES:

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 (SEOR) 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 FLOOR 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 PG 3 IS THE REQUIRED MIN SPACING OF THE GIVEN DIA ANCHORS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS & 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 REISSUED 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 PG 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 TEST 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR. TESTING & SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5 & CAC 7-149. ALL REPORTS SHALL BE SENT TO THE INSPECTOR IF 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 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE FOR WEDGE TYPE EXPANSION ANCHORS MUST BE REACHED WITHIN THE FOLLOWING LIMITS:
ONE-HALF (½) TURN OF THE NUT.
 - D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
 - E. PROVIDE FOR FULL THRD ENGAGEMENT OF NUT & WASHER.



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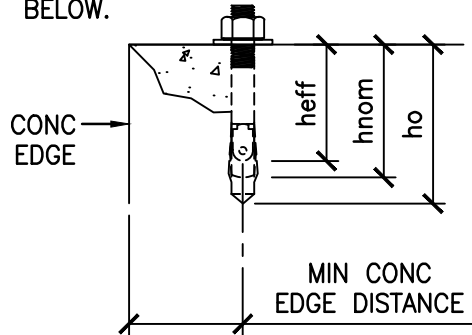
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GENERAL NOTES CONTINUED:

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



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	25/16	2	25/8	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.

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)	TENSION TEST LOAD (LBS)
1/4	15/8	1.18	2	3/4	1 1/4*	10*	400

* SEE PG 13 IN THIS OPM & FOOTNOTE 2, TABLE 2 IN ESR-3027



SHEET TITLE: GENERAL NOTES (CONTINUED)



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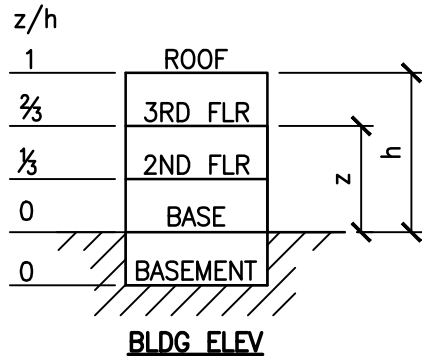
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GENERAL NOTES CONTINUED:

6. THREE (3) CASES OF ATTACHMENT ARE SPECIFIED & PRESENTED IN THIS PRE-APPROVAL:

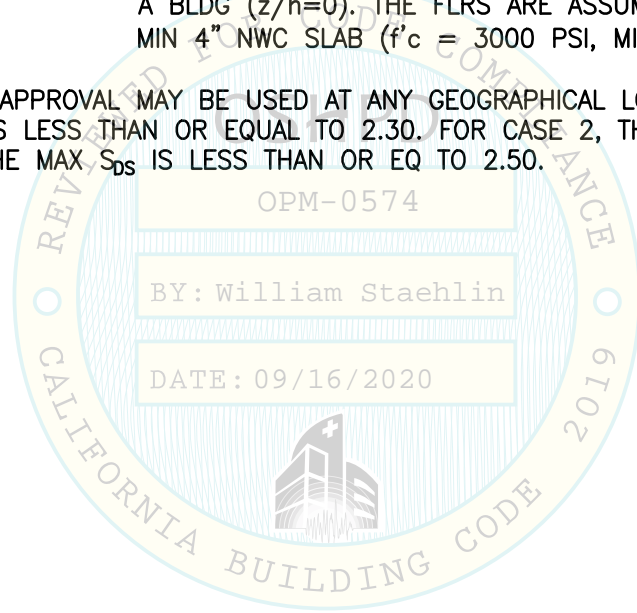


CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 1$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN $3\frac{1}{4}$ " SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK ($f'_c = 3000$ PSI, MIN). FLR ANCHORS SHALL BE A36 STL THRD ROD THRU CONC FILL & MTL DECK.


CASE 2: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 0.8$). 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). FLR ANCHORS SHALL BE CS HILTI KB-TZ EMBED INTO CONC.

CASE 3: 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. FOR CASE 1, THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{ps} IS LESS THAN OR EQUAL TO 2.30. FOR CASE 2, THE MAX S_{ps} IS LIMITED TO 1.7. FOR CASE 3, THE MAX S_{ps} IS LESS THAN OR EQ TO 2.50.



SHEET TITLE: GENERAL NOTES (CONTINUED)

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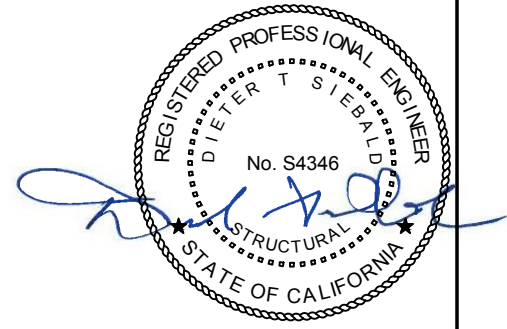
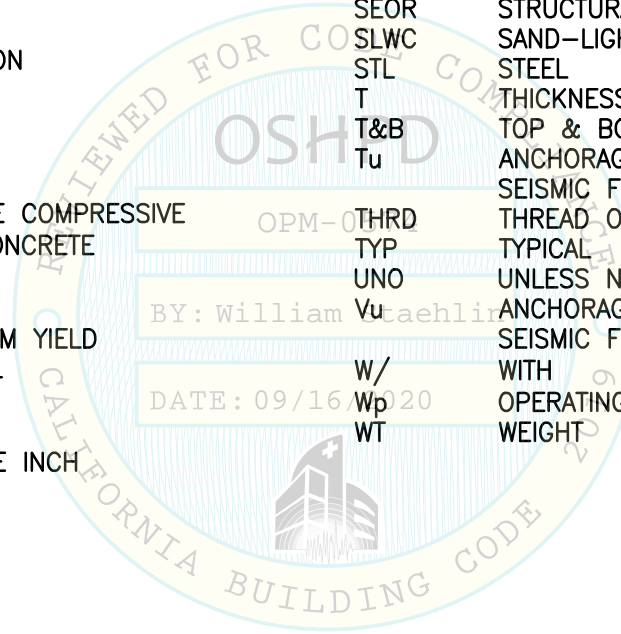
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STIM SYSTEM



ABBREVIATIONS:

⊙	AT	LBS	POUNDS
AB	ANCHOR BOLT	LRFD	LOAD AND RESISTANCE FACTOR DESIGN
ABV	ABOVE	MAX	MAXIMUM
ADJ	ADJACENT	MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	mm	MILLIMETER
BLDG	BUILDING	MTL	METAL
BLW	BELOW	NO. (#)	NUMBER OR POUNDS
BOTT	BOTTOM	NWC	NORMAL WEIGHT CONCRETE
CBC	CALIFORNIA BUILDING CODE	OPM	OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATIONS
CG	CENTER OF GRAVITY	OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
⊥	CENTERLINE	PG(S)	PAGE(S)
CONC	CONCRETE	PL	PLATE
COORD	COORDINATE	PSI	POUNDS PER SQUARE INCH
CS	CARBON STEEL	REINF	REINFORCING/REINFORCEMENT
DBL	DOUBLE	SEOR	STRUCTURAL ENGINEER OF RECORD
DIA (∅)	DIAMETER	SLWC	SAND-LIGHTWEIGHT CONCRETE
DTL	DETAIL	STL	STEEL
(E)	EXISTING CONDITION	T	THICKNESS
EA	EACH	T&B	TOP & BOTTOM
ELEV	ELEVATION	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
EMBED	EMBEDMENT	THRD	THREAD OR THREADED
EQUIP	EQUIPMENT	TYP	TYPICAL
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
FT (')	FOOT/FEET	W/	WITH
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL	Wp	OPERATING WEIGHT
GA	GAUGE	WT	WEIGHT
IN (")	INCH		
KSI	KIPS PER SQUARE INCH		



SHEET TITLE: ABBREVIATIONS



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DESIGN CRITERIA

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

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

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

W_p AS NOTED ON EQUIP DRAWING SHOWN ON PG 7 & TABLE BLW

FOR CASE 1 – UPPER FLRS ABV THE BASE, $z/h = 1$
 $S_{Ds} = 2.300 \quad F_p = 2.760 W_p \quad E_v = 0.460 W_p$

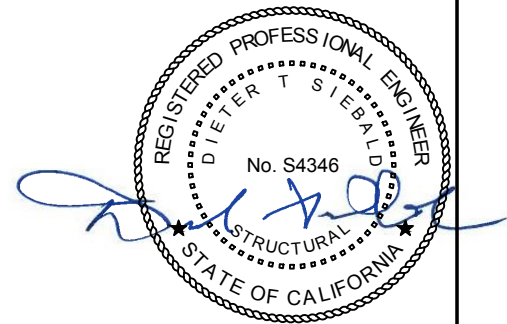
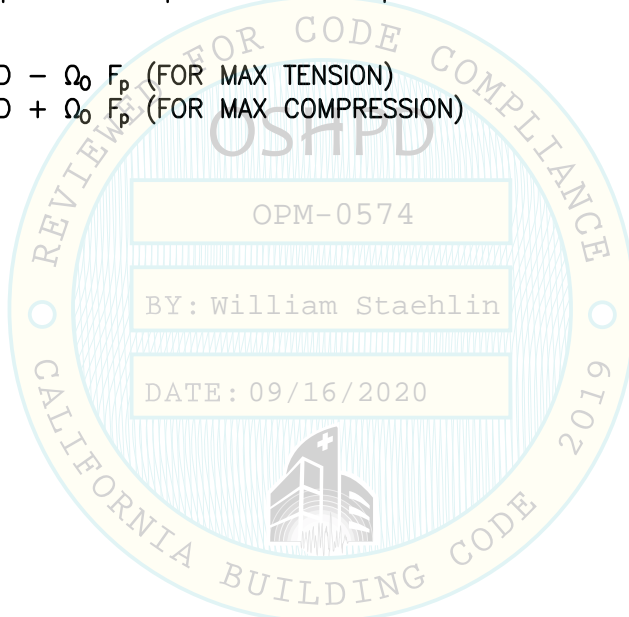
FOR CASE 2 – UPPER FLRS ABV THE BASE, $z/h = 0.8$
 $S_{Ds} = 1.700 \quad F_p = 1.768 W_p \quad E_v = 0.340 W_p$

FOR CASE 3 – SLAB AT OR BLW BASE, $z/h = 0$
 $S_{Ds} = 2.500 \quad F_p = 1.125 W_p \quad E_v = 0.500 W_p$

LOAD COMBINATIONS

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

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



SHEET TITLE: DESIGN CRITERIA



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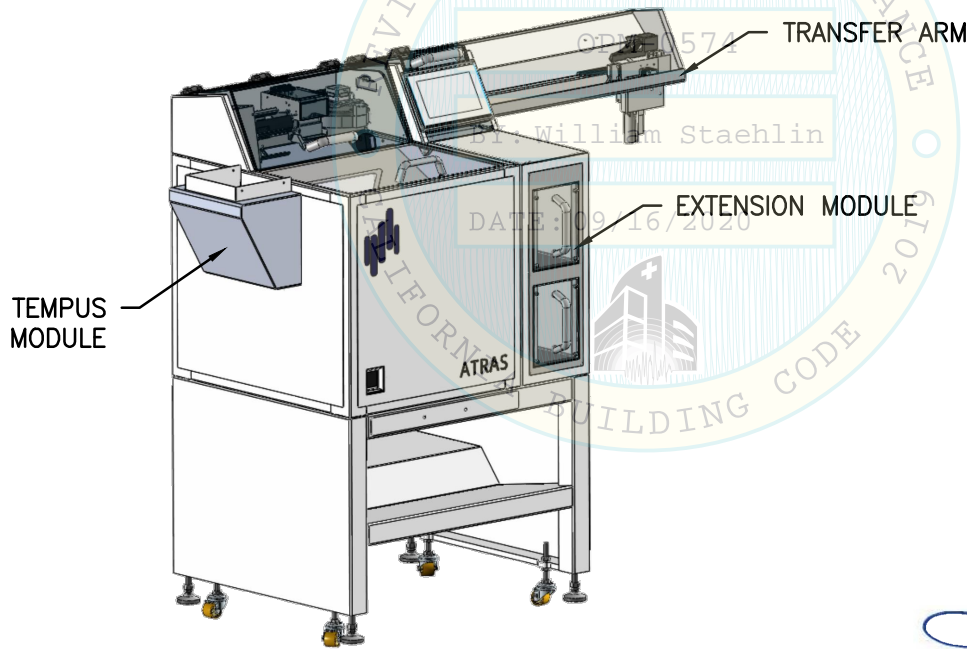


STIM SYSTEM CONFIGURATIONS DIMENSIONS & WEIGHTS

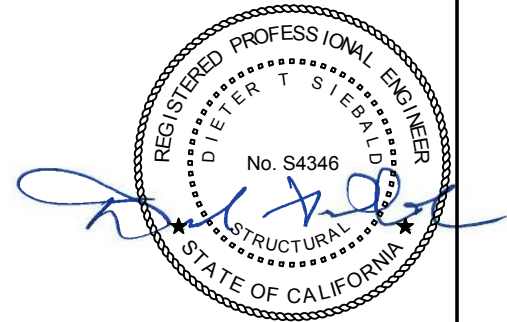
CONFIGURATION W/ W/	WIDTH W (IN) (mm)	LENGTH L (IN) (mm)	HEIGHT H (IN) (mm)	H _{CG} (IN) (mm)	E _x (IN) (mm)	E _y (IN) (mm)	LEG SPACING X (IN) (mm)	LEG SPACING Y (IN) (mm)	WEIGHT Wp (LBS) (kg)	OP WEIGHT (LBS) (kg)
1 EXTENSION MODULE	27.6 (700)	23.6 (600)	48.0 (1200)	24.3 (617)	2.3 (58)	1.9 (48)	25.6 (650.3)	21.65 (540)	310.9 (141)	354.2 (161)
2 EXTENSION MODULES	35.4 (900)	23.6 (600)	48.0 (1200)	24.7 (627)	2.4 (61)	1.7 (43)	33.5 (840.6)	21.65 (540)	368.2 (167)	411.4 (187)
3 EXTENSION MODULES	43.3 (1100)	23.6 (600)	48.0 (1200)	24.9 (632)	2.4 (61)	1.6 (41)	41.4 (1040.9)	21.65 (540)	425.6 (193)	468.6 (213)
4 EXTENSION MODULES	51.2 (1300)	23.6 (600)	48.0 (1200)	25.0 (636)	2.4 (61)	1.5 (38)	49.3 (1241.2)	21.65 (540)	480.7 (218)	523.6 (238)
5 EXTENSION MODULES	59.1 (1500)	23.6 (600)	48.0 (1200)	25.1 (637)	2.4 (61)	1.4 (36)	57.2 (1441.5)	21.65 (540)	533.6 (242)	576.4 (262)

NOTE:

THERE ARE A TOTAL OF 10- POSSIBLE CONFIGURATIONS. THE 5- CONFIGURATIONS SHOWN IN THE TABLE ABOVE ALL HAVE A TRANSFER ARM AT THE RIGHT SIDE OF EACH EXTENSION MODULE & A TEMPUS MODULE AT THE LEFT SIDE OF THE ATRAS MODULE. THERE ARE ALSO 5- CONFIGURATIONS THAT DO NOT HAVE A TEMPUS MODULE & THEREFORE WEIGH LESS.



**CONFIGURATION W/ 1 EXTENSION MODULE
W/ TRANSFER ARM & TEMPUS MODULE
ISOMETRIC VIEW**



SHEET TITLE: STIM SYSTEM CONFIGURATIONS



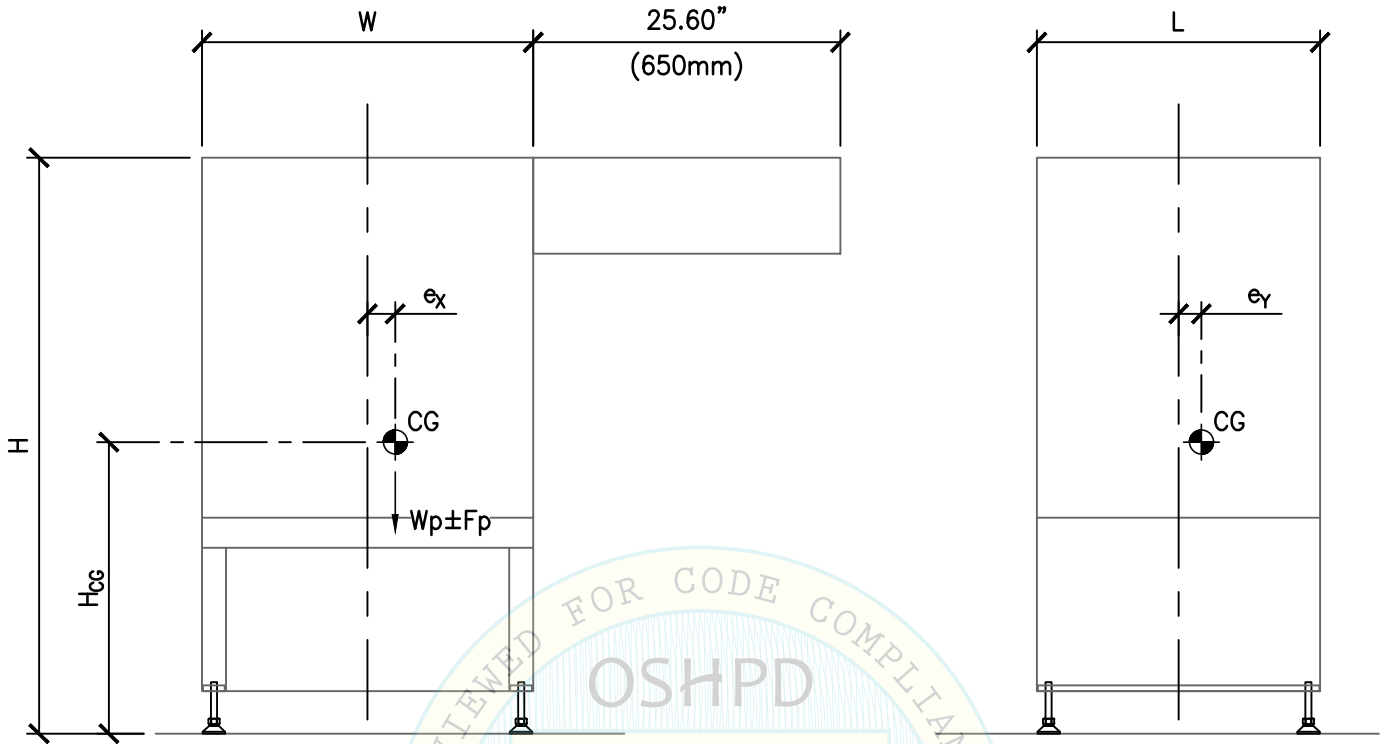
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STIM SYSTEM



FRONT ELEV

SIDE ELEV

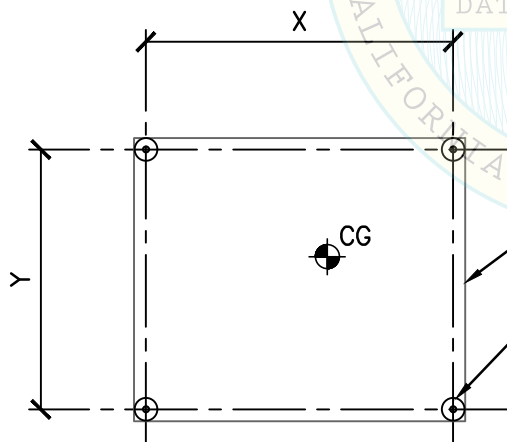
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BY: William Staehlin

DATE: 09/16/2020

NOTES:

1. STIM SYSTEM CONFIGURATION W/ ATRAS MODULE & W/ SINGLE EXTENSION MODULE & TRANSFER ARM IS SHOWN. FOR OTHER SYSTEM CONFIGURATIONS NOT SHOWN, SEE PG 7.
2. FOR STIM SYSTEM CONFIGURATION DIMS, SEE PG 7.



**FRONT
PLAN VIEW**



SHEET TITLE: STIM SYSTEM CONFIGURATIONS
PLAN VIEW & ELEVATIONS



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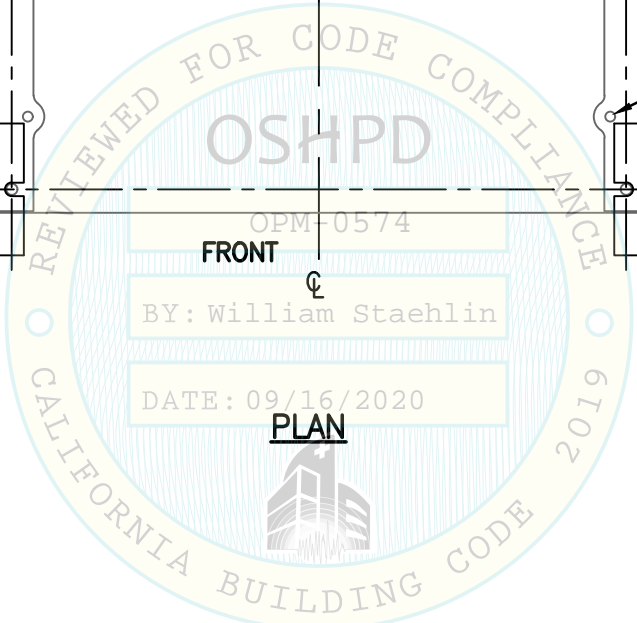
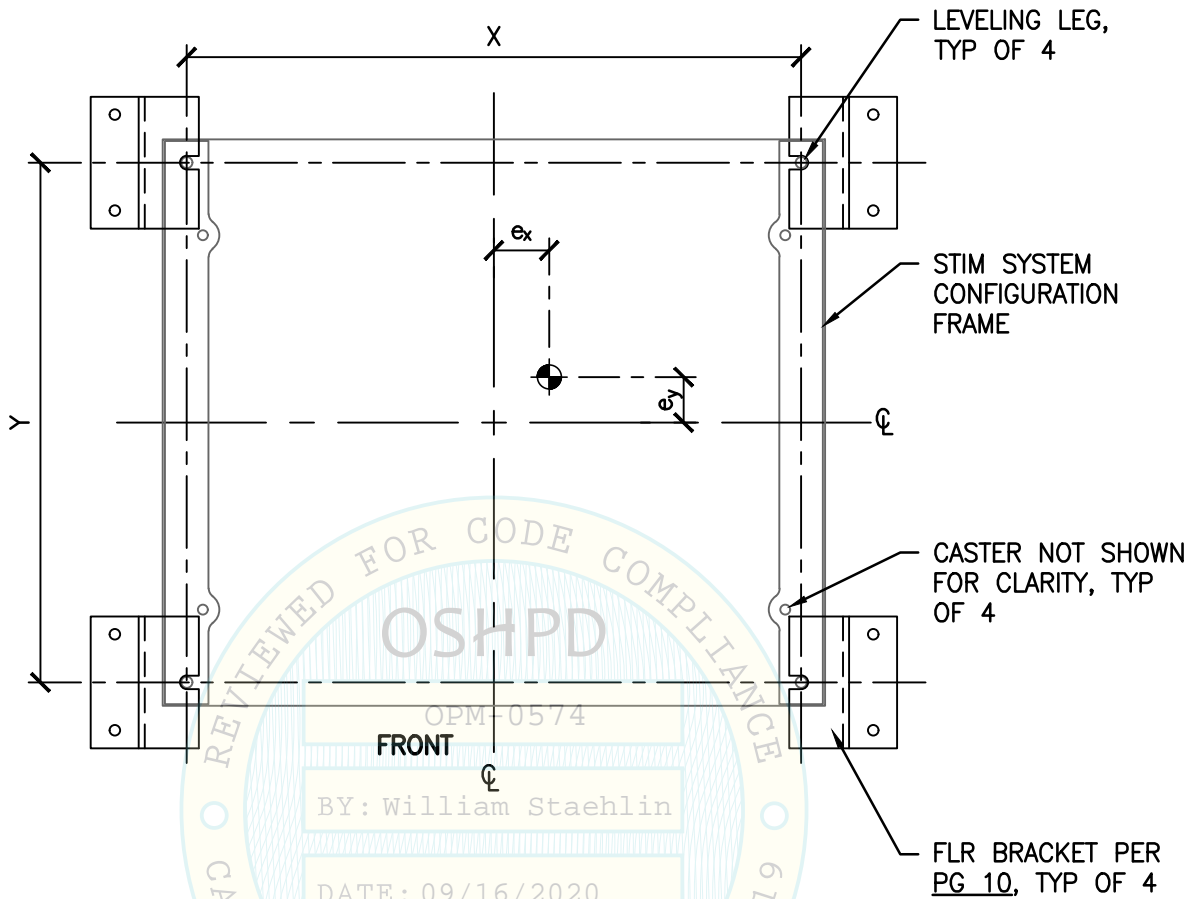
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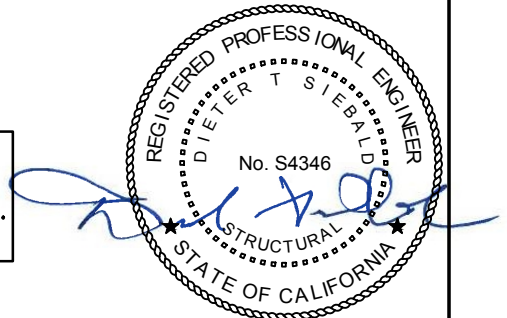
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T&O LabSystems GmbH & CO. KG
STIM SYSTEM



NOTES:

1. SEE PG 11 FOR ATTACHMENT DETAIL TO EQUIP FRAME.
2. SEE PGS 12-16 FOR ANCHORAGE DETAILS TO SUPPORTING FLR.
3. FOR DIMS, SEE PG 7.



SHEET TITLE: ANCHORAGE BRACKET LOCATIONS



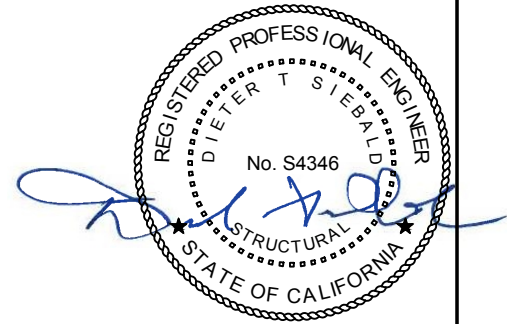
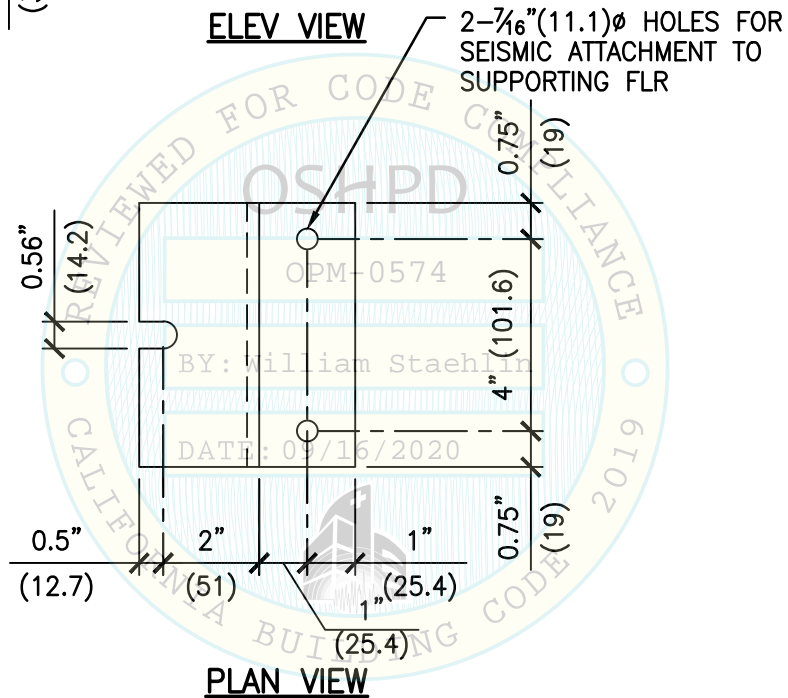
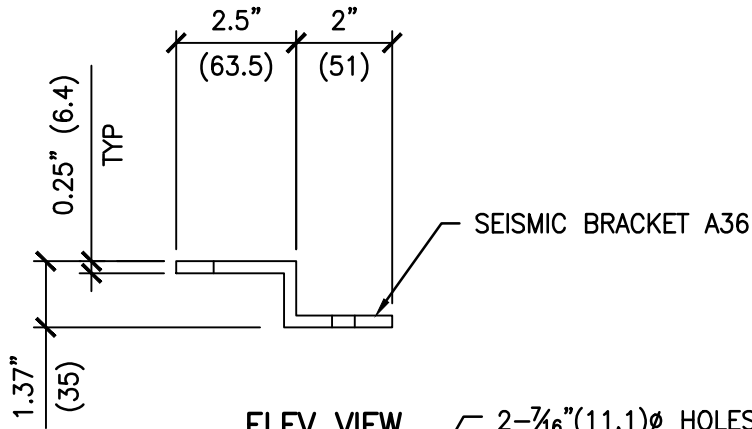
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SHEET TITLE: FLOOR BRACKET DETAIL



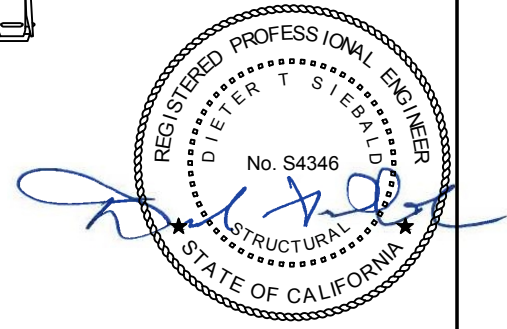
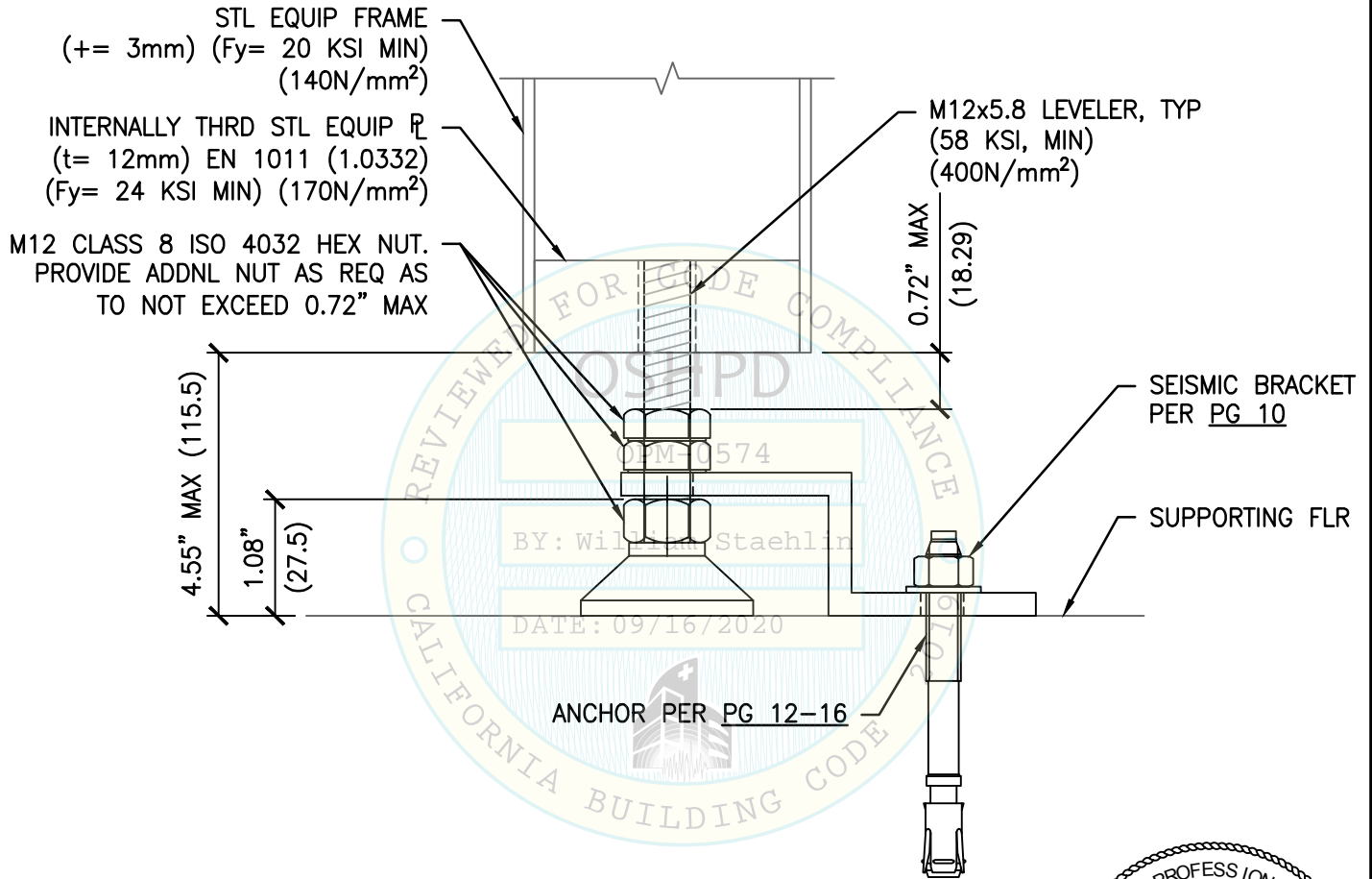
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SHEET TITLE: ATTACHMENT DETAIL TO EQUIPMENT FRAME



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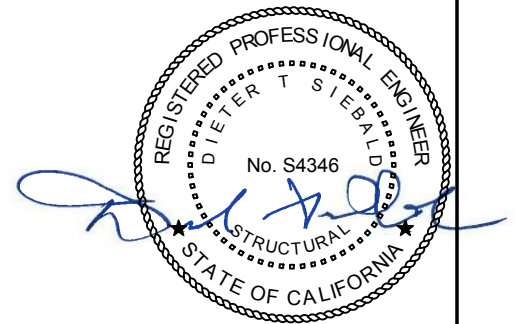
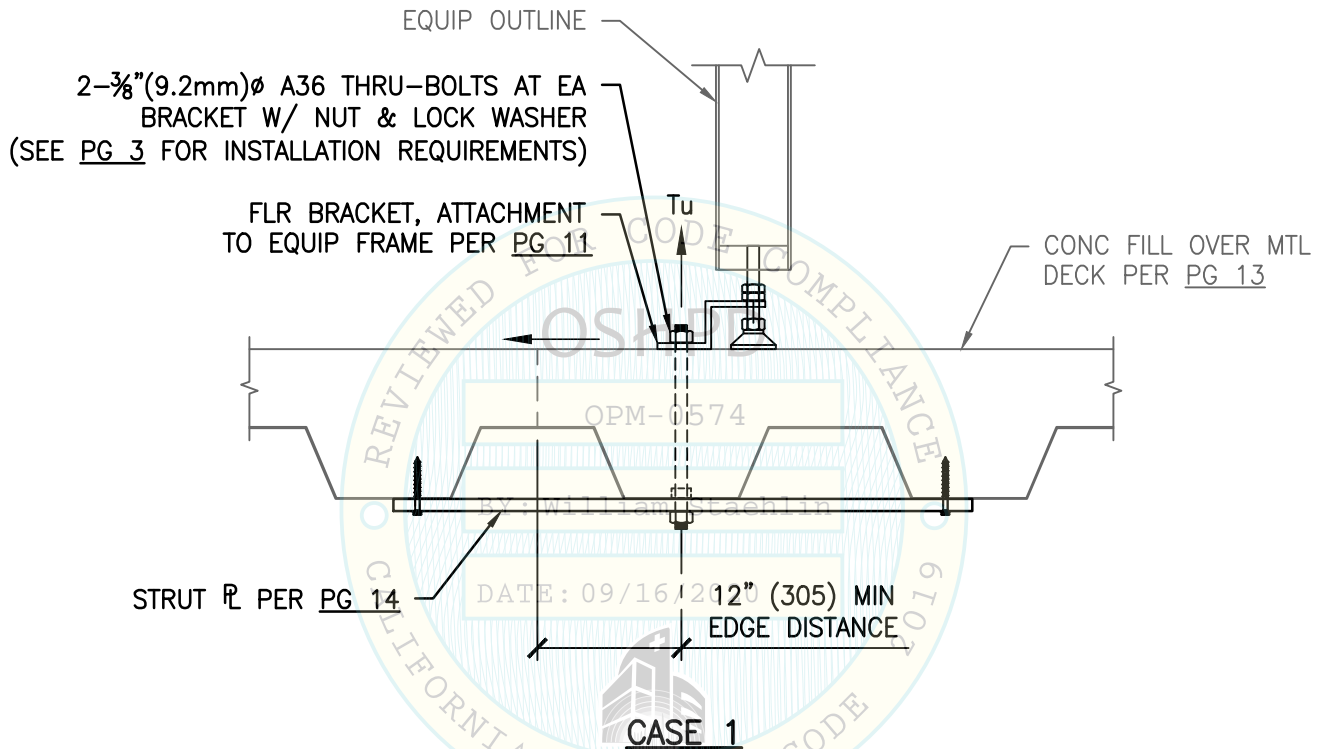
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STIM SYSTEM



MAX FORCES AT LRFD
AT EA BRACKET

	Tu	Ω_o Vu
CASE 1 $z/h \leq 1$	1198# (5329N)	954# (4244N)

OVERSTRENGTH FACTOR (Ω_o)
INCLUDED WHERE NOTED.



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



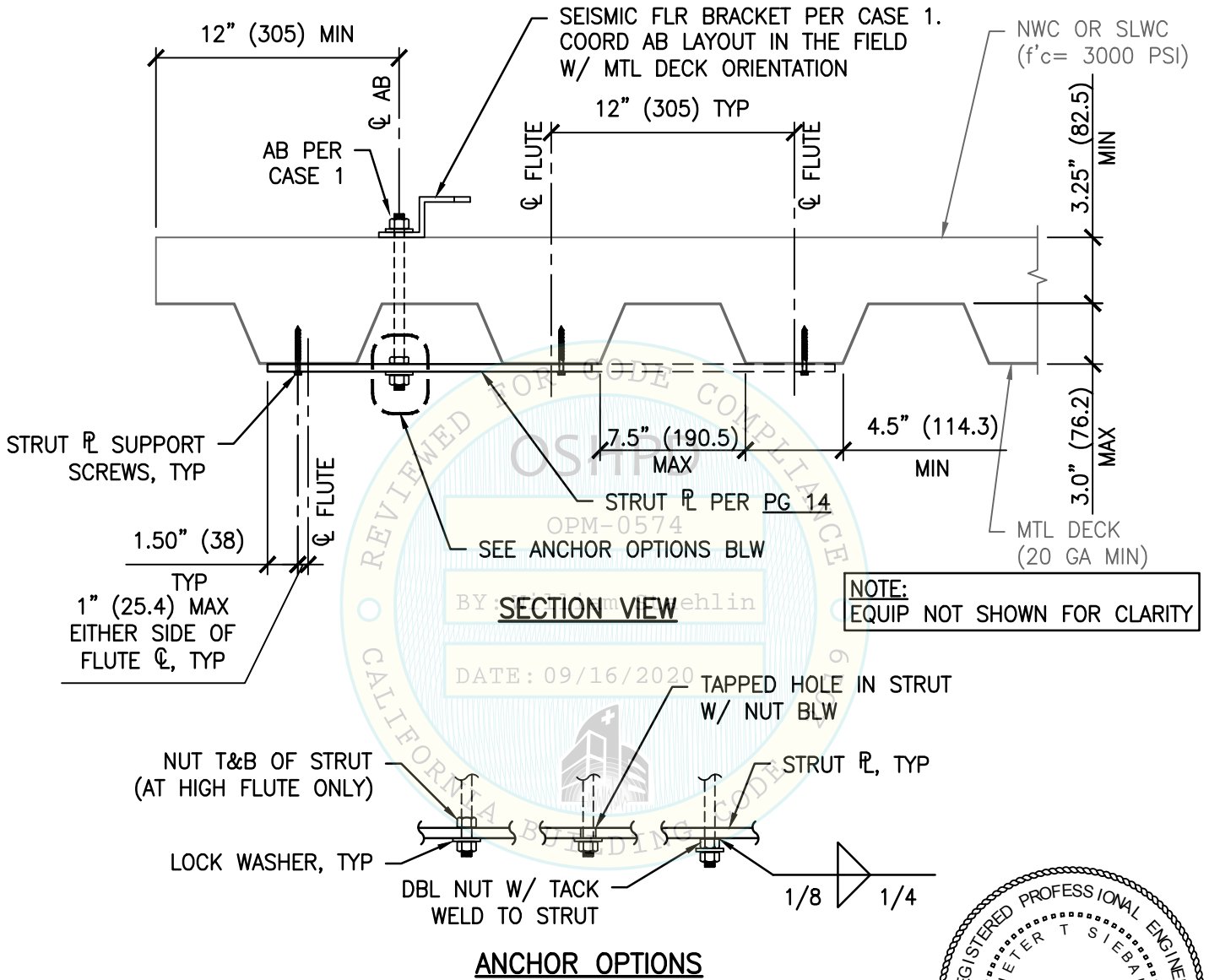
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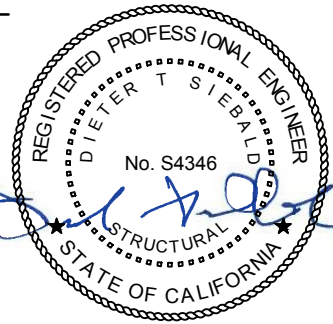
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SHEET TITLE: ANCHORAGE DETAIL
TO CONCRETE FILL OVER METAL DECK (CASE 1)

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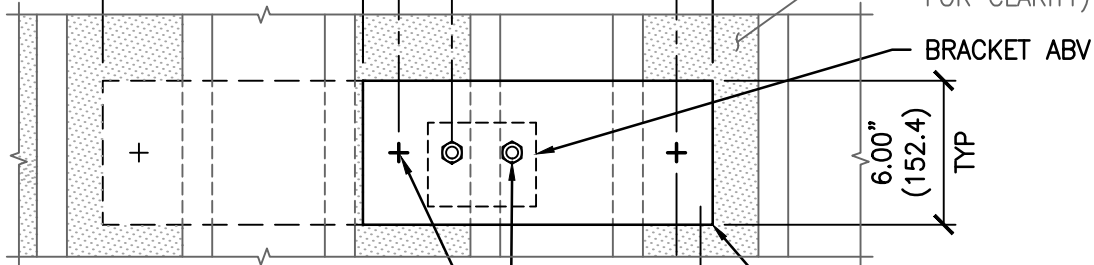


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T&O LabSystems GmbH & CO. KG
STIM SYSTEM



EXTEND STRUT LENGTH TO NEXT ADJ LOW FLUTE IF AB'S ARE LESS THAN 2" FROM STRUT ϕ SUPPORT SCREWS
LENGTH SHALL ENGAGE 2 LOW FLUTES MIN
1.50" (38.1) TYP
2.00" (50.8) MIN
BOTT OF (E) MTL DECK (LOW FLUTES SHADED FOR CLARITY)



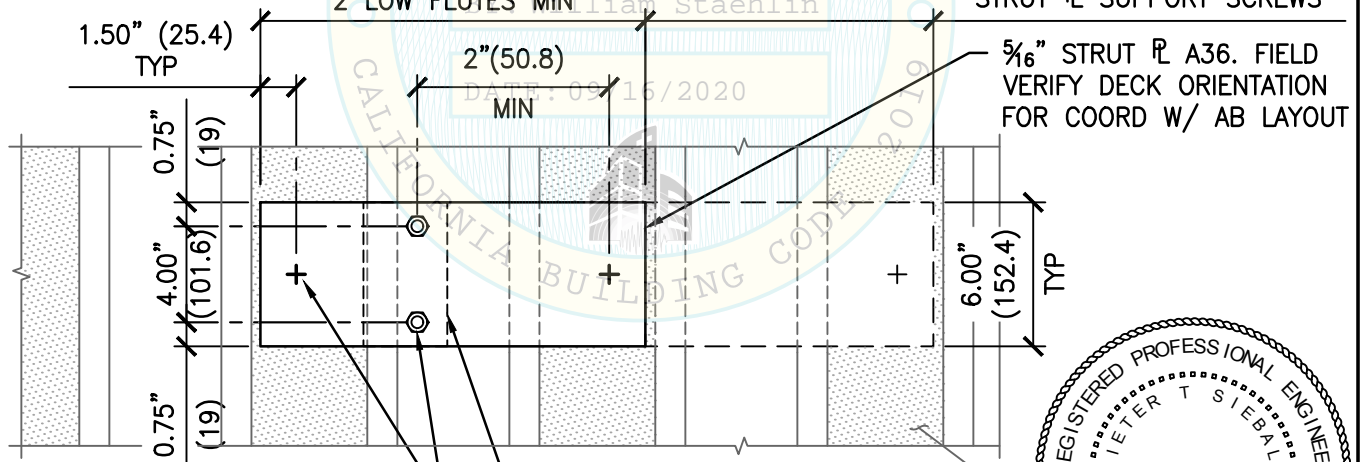
STRUT ϕ SUPPORT SCREWS: HILTI KH-EZ $\frac{1}{4}$ " ϕ x $\frac{5}{8}$ " CONC SCREWS (ICC ESR-3027) 1 EA END OF ϕ . USE 18 FT-LBS MAX INSTALLATION TORQUE USING A CALIBRATED TORQUE WRENCH, TYP
AB PER CASE 1
 $\frac{5}{16}$ " STRUT ϕ A36, TYP. FIELD VERIFY DECK ORIENTATION FOR COORD W/ AB LAYOUT
1.00" (25.4) MAX EITHER SIDE OF FLUTE ϕ , TYP

PLAN VIEW

ANCHORS PERPENDICULAR TO FLUTES

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

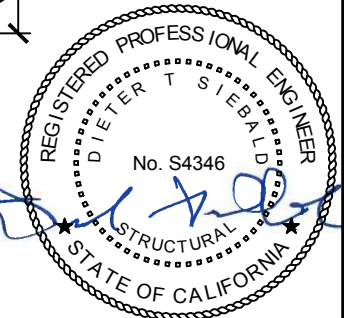
LENGTH SHALL ENGAGE 2 LOW FLUTES MIN



STRUT ϕ SUPPORT SCREWS: HILTI KH-EZ $\frac{1}{4}$ " ϕ x $\frac{5}{8}$ " CONC SCREWS (ICC ESR-3027) 1 EA END OF ϕ
BRACKET ABV BOTT OF MTL DECK (LOW FLUTES SHADED FOR CLARITY)
AB PER CASE 1
 $\frac{5}{16}$ " STRUT ϕ A36. FIELD VERIFY DECK ORIENTATION FOR COORD W/ AB LAYOUT

PLAN VIEW

ANCHORS PARALLEL TO FLUTES



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



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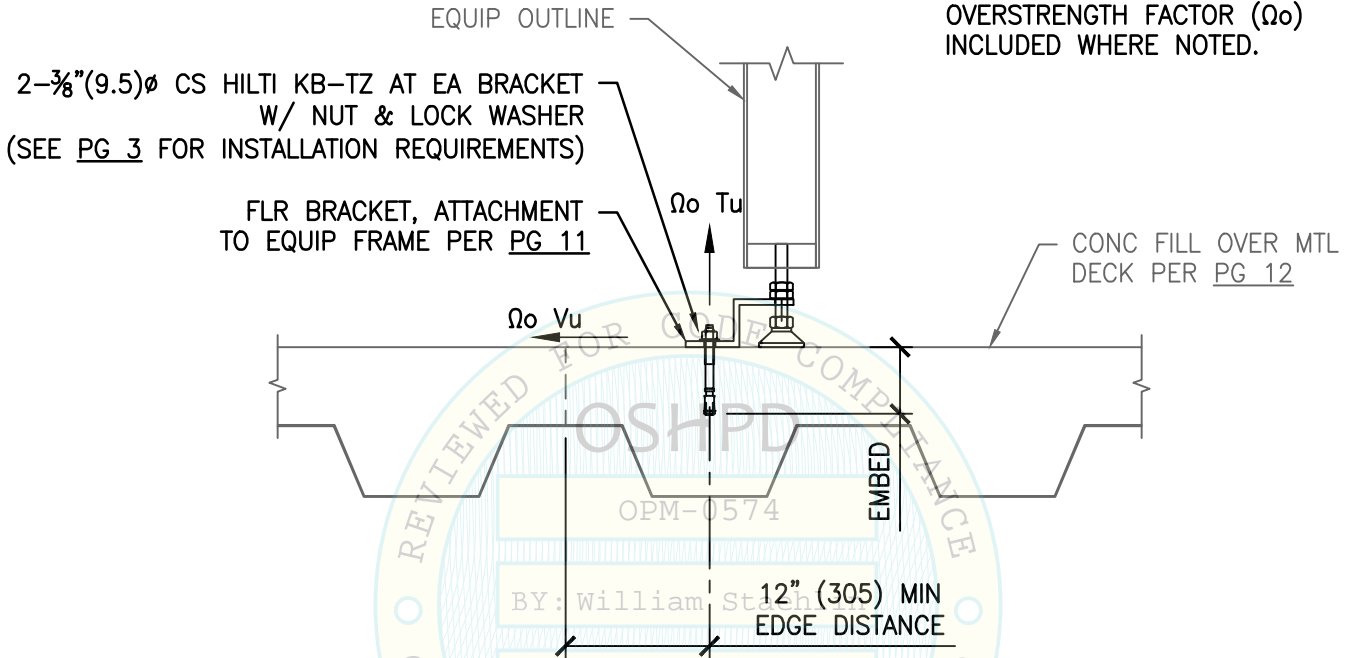
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STIM SYSTEM



MAX FORCES AT LRFD
AT EA BRACKET

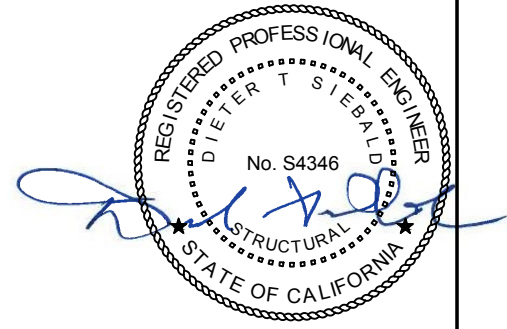
	$\Omega_o Tu$	$\Omega_o Vu$
CASE 2 $z/h \leq 0.8$	1084# (4822N)	612# (2722N)

OVERSTRENGTH FACTOR (Ω_o)
INCLUDED WHERE NOTED.



OPM-0574
BY: William Staehlin
DATE: 09/16/2020

CASE 2



SHEET TITLE: ANCHORAGE DETAIL
TO CONCRETE FILL OVER METAL DECK (CASE 2)

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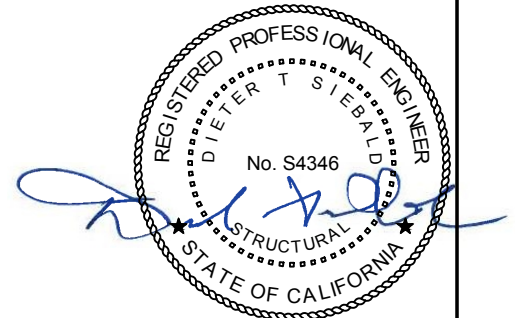
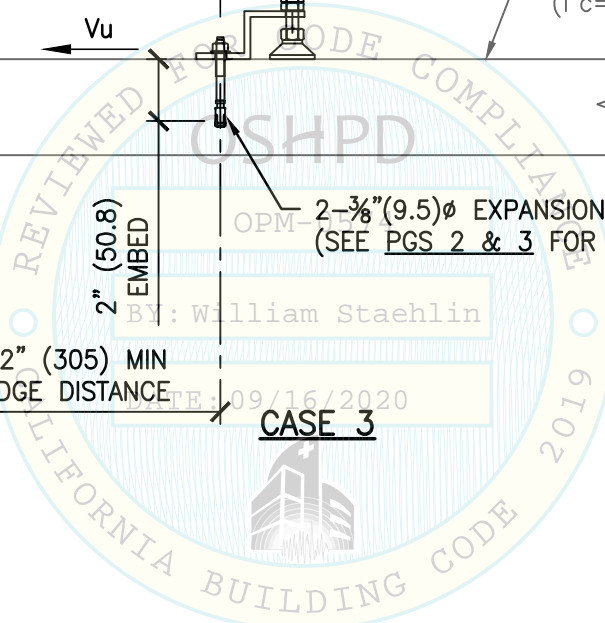
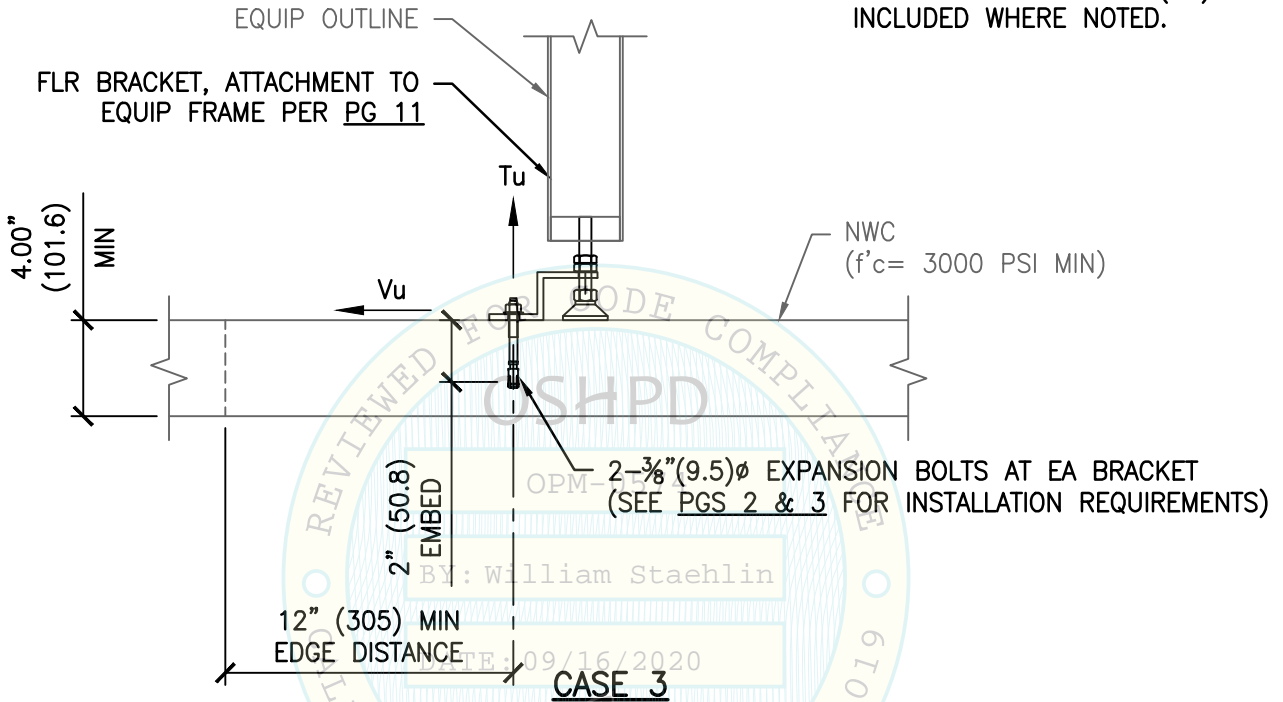
T&O LabSystems GmbH & CO. KG
STIM SYSTEM



MAX ANCHOR FORCES
AT LRFD AT EA
BRACKET

	$\Omega_o Tu$	$\Omega_o Vu$
CASE 3 $z/h = 0$	682# (3034N)	389# (1730N)

OVERSTRENGTH FACTOR (Ω_o)
INCLUDED WHERE NOTED.



SHEET TITLE: ANCHORAGE DETAIL
TO CONCRETE SLAB (CASE 3)



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