



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0645

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: Roche Diagnostics Corporation

Manufacturer's Technical Representative: Jeff Rademacher

Mailing Address: 9115 Hague Road, Indianapolis, IN 46256

Telephone: (859) 992-7523

Email: jeffrey_w.rademacher@roche.com

Product Information

Product Name: ROCHE COBAS PURE INTEGRATED SOLUTIONS SYSTEM

Product Type: Medical Analyzer

Product Model Number: cobas Pure

General Description: Chemistry & Immunochemistry Testing

Applicant Information

Applicant Company Name: _____

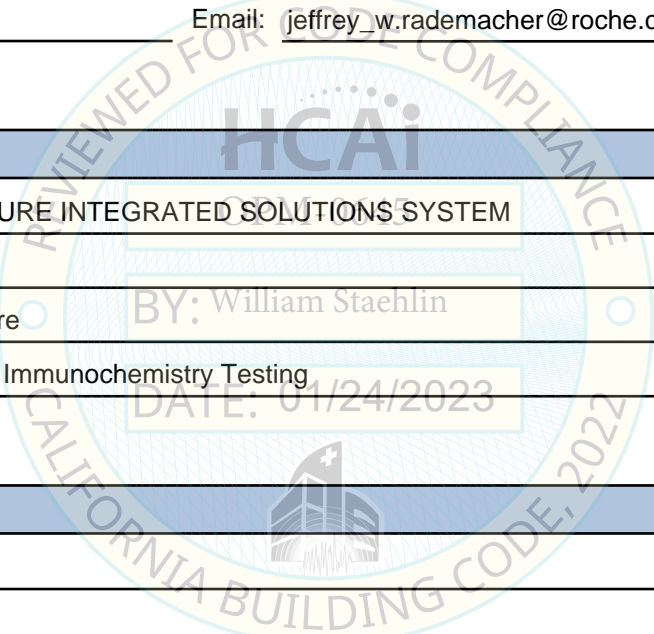
Contact Person: Dieter Siebald

Mailing Address: 2495 Natomas Park Drive, Suite 650, Sacramento, CA 95833

Telephone: (916) 687-1198

Email: dieters@cyseng.com

Title: Structural Engineer/Project Manager



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

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
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

HCAI 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

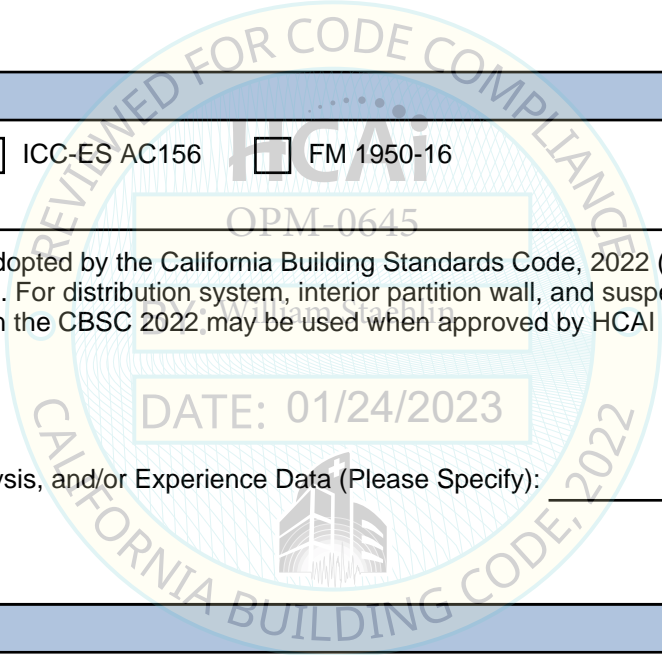
Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2022 (CBSC 2022) 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 2022 may be used when approved by HCAI prior to testing.

Analysis

Experience Data

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



HCAI Approval

Date: 1/24/2023

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable): _____

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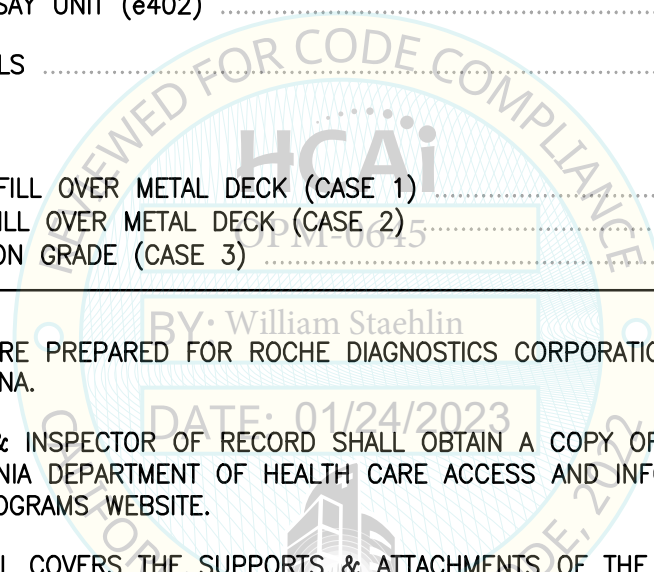


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NOTES:

1. THESE DRAWINGS ARE PREPARED FOR ROCHE DIAGNOSTICS CORPORATION, INDIANAPOLIS, INDIANA.
2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION (HCAI) PRE-APPROVAL PROGRAMS WEBSITE.
3. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE UNIT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT UNITS INCLUDING LEVELING LEGS ARE SUPPLIED BY ROCHE. THE SEISMIC BRACKETS, THRU-BOLTS & EXPANSION ANCHORS SHOWN IN THIS OPM SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.



SHEET TITLE: TABLE OF CONTENTS



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

Job No:	22076
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



GENERAL NOTES:

1. THIS HCAI PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2022. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2022.
2. IT IS THE RESPONSIBILITY OF THE SEOR FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - A. THE ADEQUACY OF THE NEW OR EXISTING STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EA EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
 - B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPGS.
 - C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPCG SHOWN IN THE EXPANSION ANCHOR TABLE ON PG 3 IS THE REQ MIN SPCG OF THE GIVEN DIA ANCHORS. THE REQ SPCG FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2022 & W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAGE OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFO 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 STEEL HILTI KB-TZ2 EXPANSION ANCHORS AS NOTED COMPLYING W/ ESR-4266 ISSUED DECEMBER 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 EXPANSION ANCHOR TABLE ON PG 3.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOBSITE TESTING IN ACCORDANCE W/ THE EXPANSION ANCHOR TABLE PROVIDED IN THIS DOCUMENT. TORQUE TEST 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 HCAI. 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 NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIPMENT INSTALL. ALSO REFER TO 2022 CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE". REPORT OF TEST RESULTS SHALL BE SUBMITTED TO HCAI.
 - C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN 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.
 - E. PROVIDE FOR FULL THRD ENGAGEMENT OF NUT & WASHER.
4. BOLTS THRU 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 REQ 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 CONN IN TENSION DO NOT REQUIRE TESTING.



SHEET TITLE: GENERAL NOTES

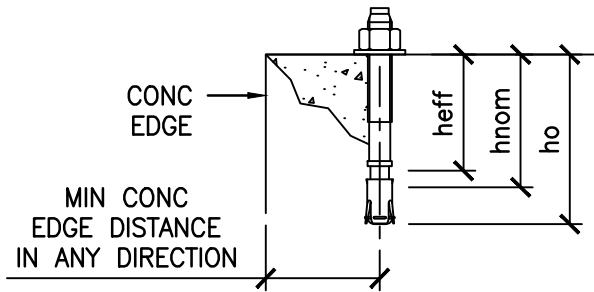
<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076 Date: 12/08/2022 Page: 2 of 20
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



GENERAL NOTES CONTINUED:



EXPANSION ANCHOR TABLE

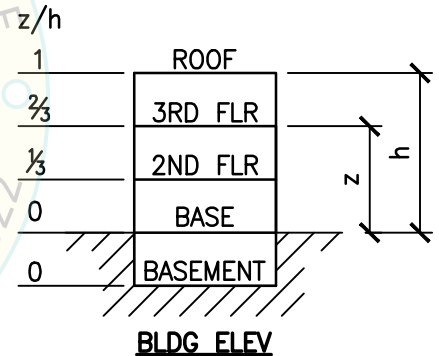
CONDITION OF ANCHORAGE	ANCHOR DIA & TYPE (INCH)	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THK (INCH) h	MIN CONC EDGE DISTANCE (INCH)	MIN ANCHOR SPCG (INCH)	TEST TORQUE (FT-LBS)
CASE 1	3/8 KB-TZ2	1 7/8	1 1/2	2	3/4	8	5	30
CASE 2,3	1/2 KB-TZ2	2 1/2	2	2 3/4	4	8	5	30

5. 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. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STEEL THRD ROD THRU CONC FILL & MTL DECK.

CASE 2: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STEEL & INTO CONC FILL.

CASE 3: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STEEL.



SHEET TITLE: GENERAL NOTES (CONTINUED)



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**ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM**



DESIGN CRITERIA:

1. SUPPORT & ATTACHMENT DESIGN IS PER 2022 CBC AT LRFD LEVEL FORCES.

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

$q_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$ $\Omega_0 = 1.5$ (FOR CONC ANCHORS ONLY)

W_p AS NOTED ON DRAWINGS

UPPER FLRS ABV THE BASE OF BLDG

CASE 1: $S_{DS} \leq 1.30$ $F_p = 1.14 W_p$ $z/h \leq 0.60$
 CASE 2: $S_{DS} < 0.80$ $F_p = 0.64 W_p$ $z/h \leq 0.50$

FLRS AT OR BLW THE BASE OF BLDG

CASE 3: $S_{DS} \leq 2.00$ $F_p = 0.90 W_p$ $z/h = 0$

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)

2. THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{DS} & z/h IS LESS THAN OR EQ TO THE VALUES NOTED ABV. SEOR SHALL VERIFY THAT OTHER COMBINATIONS OF S_{DS} & z/h MUST RESULT IN AN F_p VALUE THAT IS EQ TO OR LESS THAN F_p FORCE FOR CASE UNDER CONSIDERATION.

SYSTEM OVERVIEW:

THE ROCHE COBAS PURE SYSTEM CONSISTS OF ONE SAMPLE SUPPLY UNIT AND TWO ANALYTICAL UNITS. SAMPLES ARE LOADED AND UNLOADED FROM THE SAMPLE SUPPLY UNIT. THERE ARE THREE CONFIGURATIONS THAT ARE CONSIDERED FOR THIS OPM. PLEASE NOTE THAT UNITS ARE LISTED FROM LEFT TO RIGHT FOR EACH CONFIGURATION BELOW:

- c303 CONFIGURATION (CONSISTS OF THE SSU & c303)
- e402 CONFIGURATION (CONSISTS OF THE e402 & SSU)
- FULL INTEGRATED CONFIGURATION (CONSISTS OF THE e402, SSU & c303 UNITS)

COMPONENT DIMENSIONS SCHEDULE:

NO.	COMPONENT	LEVELING FOOT DIMS		CG	OP WT (W_p)	PG
		WIDTH	DEPTH	H_{CG}		
1.	SAMPLE SUPPLY UNIT (SSU)	13"	27.7"	20.1"	440#	9
2.	COBAS c303	34.1"	25.2"	20.6"	880#	10
3.	COBAS e402	34.1"	25.2"	18.7"	880#	11



SHEET TITLE: SYSTEM OVERVIEW & DESIGN CRITERIA

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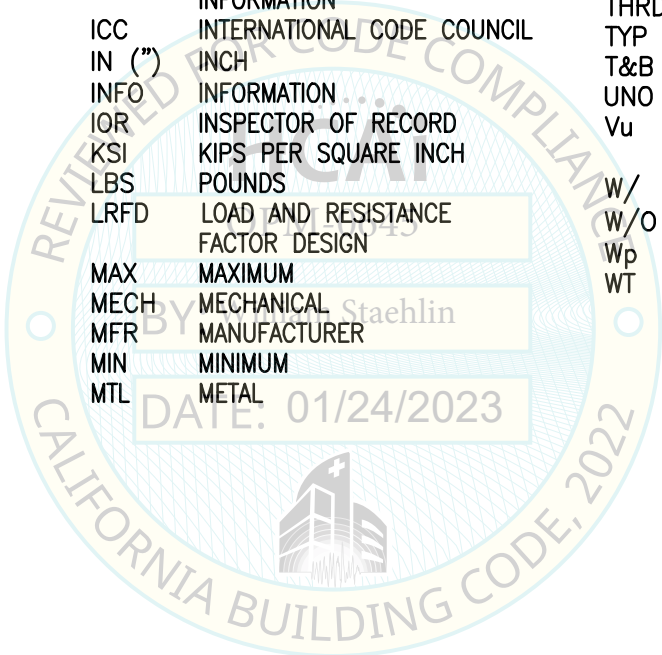
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



ABBREVIATIONS:

@	AT	f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	(N)	NEW
AB	ANCHOR BOLT			NO. (#)	NUMBER OR POUNDS
ABV	ABOVE	FLR	FLOOR	NWC	NORMAL WEIGHT CONCRETE
ADJ	ADJACENT	FT (")	FOOT/FEET	OPG	OPENING
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	F _p	HORIZONTAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS	PERP	PERPENDICULAR
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	F _v	VERTICAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS	PG	PAGE
BLDG	BUILDING	F _y	SPECIFIED MINIMUM YIELD STRESS OF STEEL	PL	PLATE
BLW	BELOW	GA	GAUGE	PSI	POUNDS PER SQUARE INCH
BOTT	BOTTOM	HCAI	CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION	REQ	REQUIRED
CBC	CALIFORNIA BUILDING CODE	ICC	INTERNATIONAL CODE COUNCIL	SLWC	SAND-LIGHTWEIGHT CONCRETE
CG	CENTER OF GRAVITY	IN (")	INCH	SPCG	SPACING
CL	CENTERLINE	IOR	INSPECTOR OF RECORD	STL	STEEL
CONC	CONCRETE	KSI	KIPS PER SQUARE INCH	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
CONN	CONNECTION	LBS	POUNDS	THK	THICK/THICKNESS
COORD	COORDINATE	LRFD	LOAD AND RESISTANCE FACTOR DESIGN	THRD	THREAD OR THREADED
DBL	DOUBLE	MAX	MAXIMUM	TYP	TYPICAL
DIA (φ)	DIAMETER	MECH	MECHANICAL	T&B	TOP & BOTTOM
DIM	DIMENSION	MFR	MANUFACTURER	UNO	UNLESS NOTED OTHERWISE
(E)	EXISTING CONDITION	MIN	MINIMUM	Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
EA	EACH	MTL	METAL	W/	WITH
EE	EACH END			W/O	WITHOUT
ELEV	ELEVATION			Wp	OPERATING WEIGHT
EQ	EQUAL			WT	WEIGHT
EQUIP	EQUIPMENT				

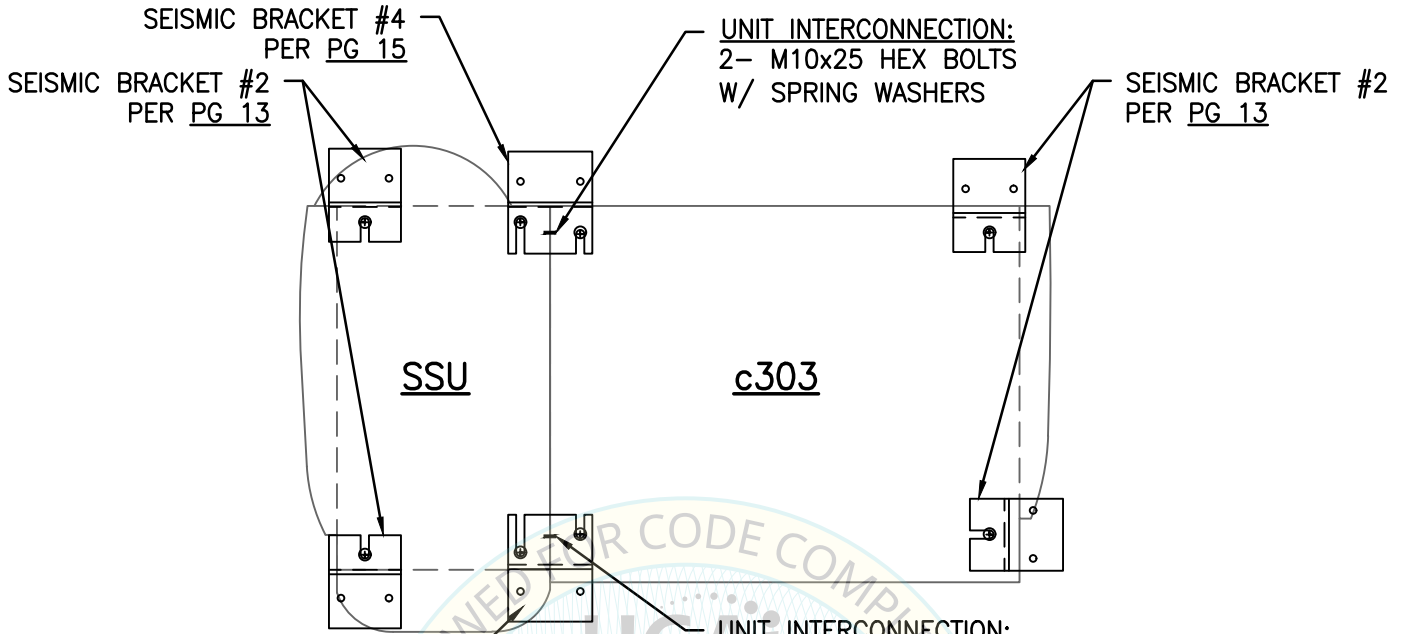


SHEET TITLE: ABBREVIATIONS

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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



NOTE:
 FOR MODULE DIMS & CG'S,
 SEE PG 4 & 9-11

REVIEWED FOR CODE COMPLIANCE
 OPM-0645
 BY: William Staehlin
 DATE: 01/24/2023

PLAN VIEW



3D VIEW

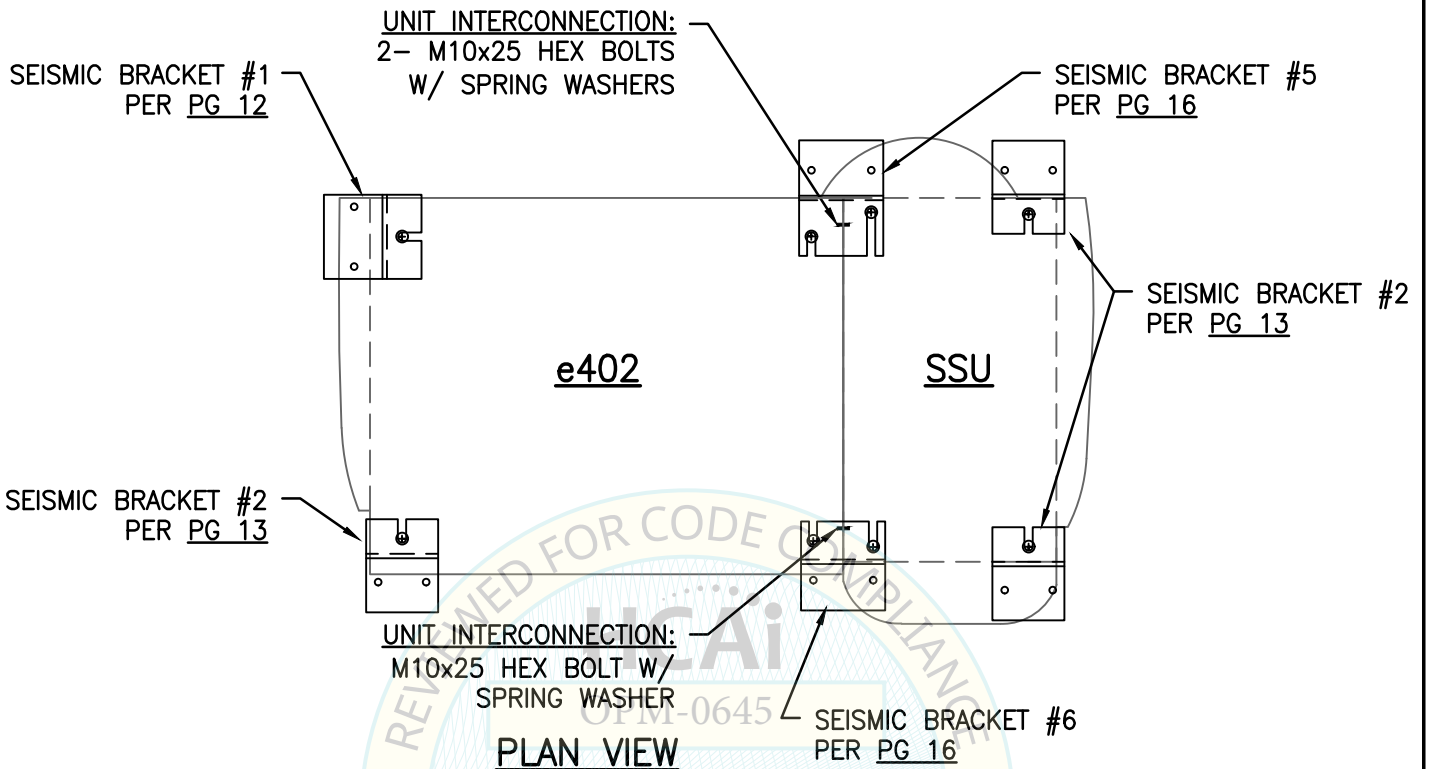


SHEET TITLE: SYSTEM COMBINATION PLAN
 c303 CONFIGURATION

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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



PLAN VIEW
 BY: William Staehlin

NOTE:
 FOR MODULE DIMS & CG'S,
 SEE PGS 4 & 9-11



3D VIEW

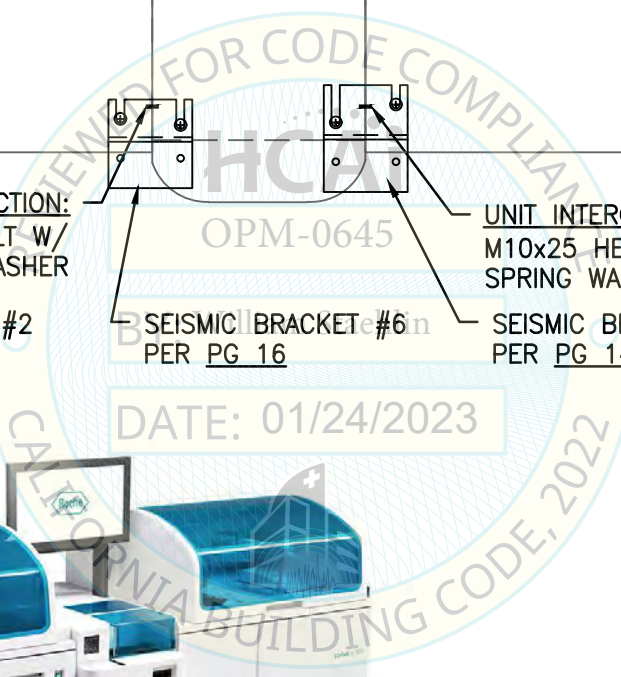
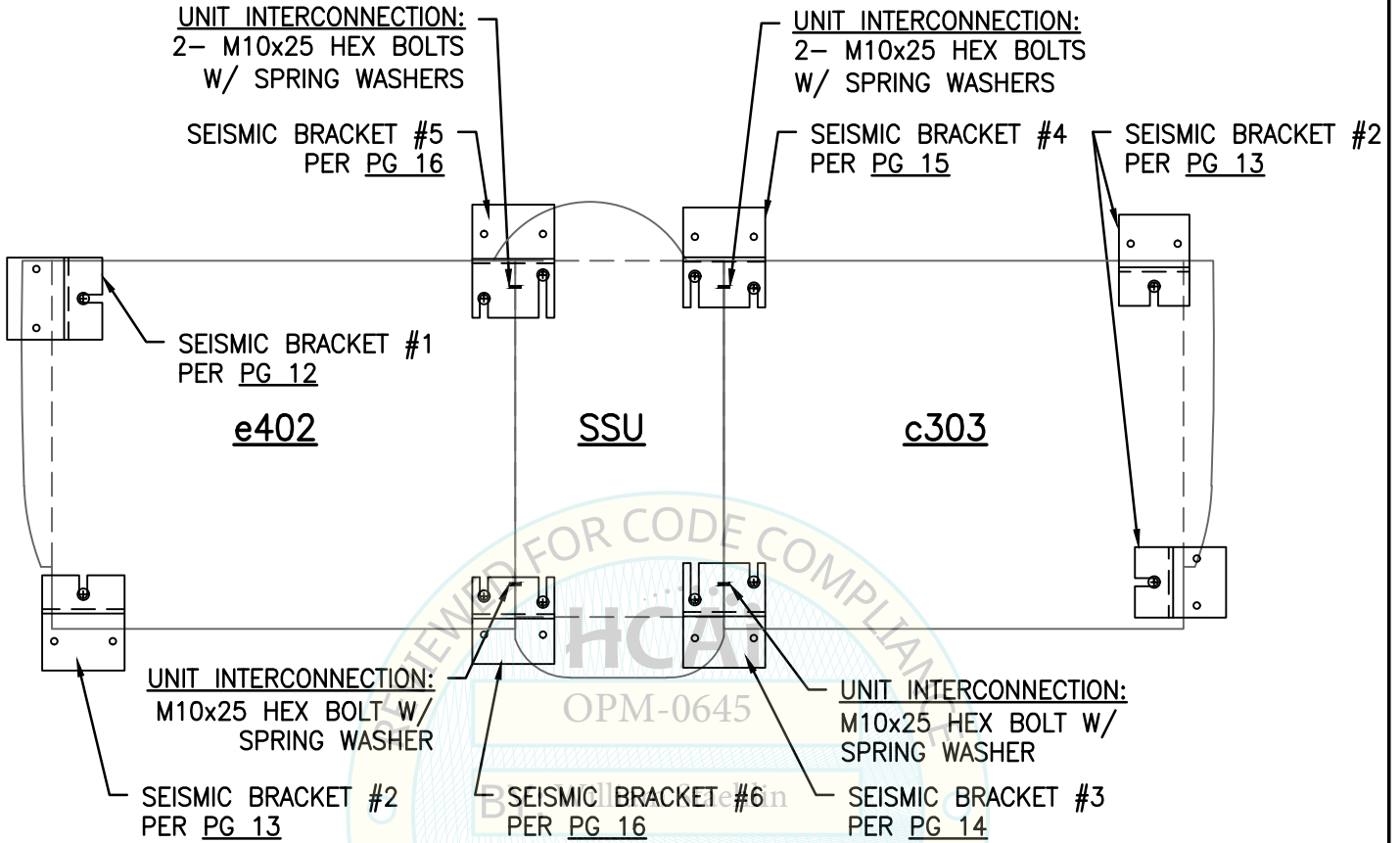


SHEET TITLE: SYSTEM COMBINATION PLAN
 e402 CONFIGURATION

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076 Date: 12/08/2022 Page: 7 of 20
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



SHEET TITLE: SYSTEM COMBINATION PLAN
 FULL INTEGRATED CONFIGURATION

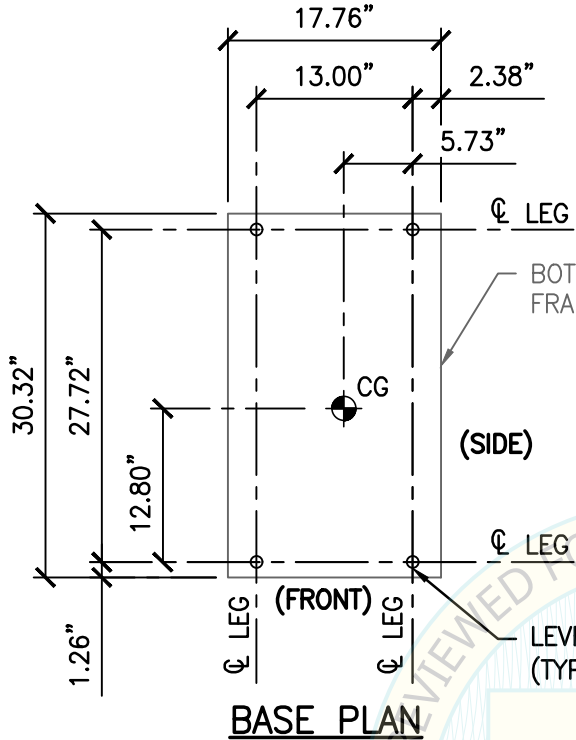
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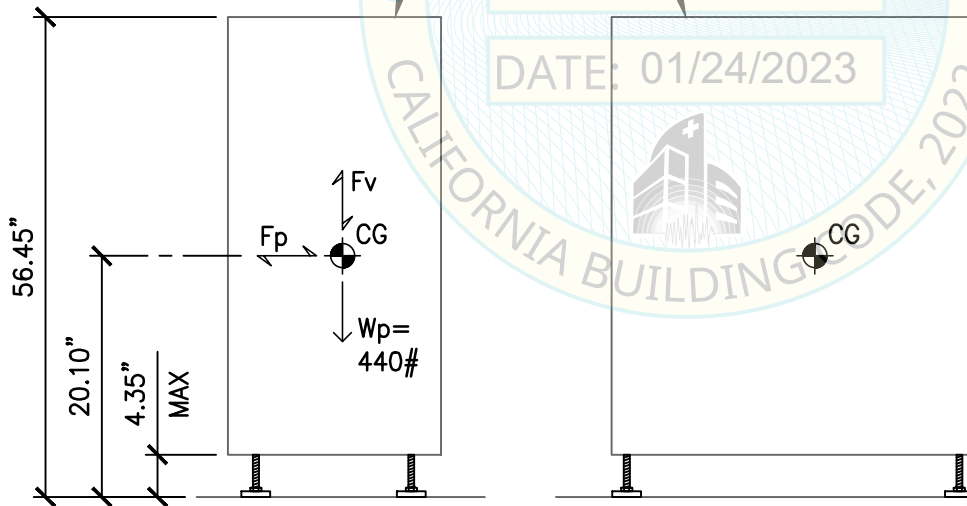
ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PGS 19-20 FOR FRAME MATERIAL PROPERTIES.

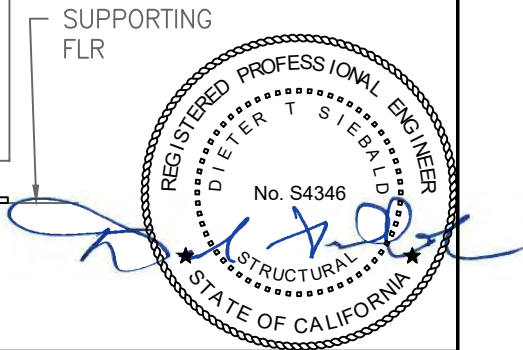
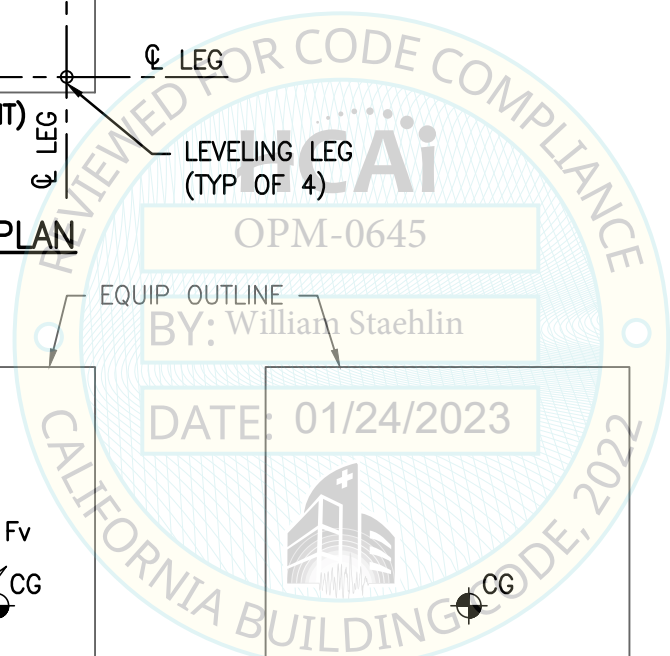


BASE PLAN



FRONT ELEV

SIDE ELEV



SHEET TITLE: COMPONENT PLAN & ELEVATIONS
 SAMPLE SUPPLY UNIT (SSU)

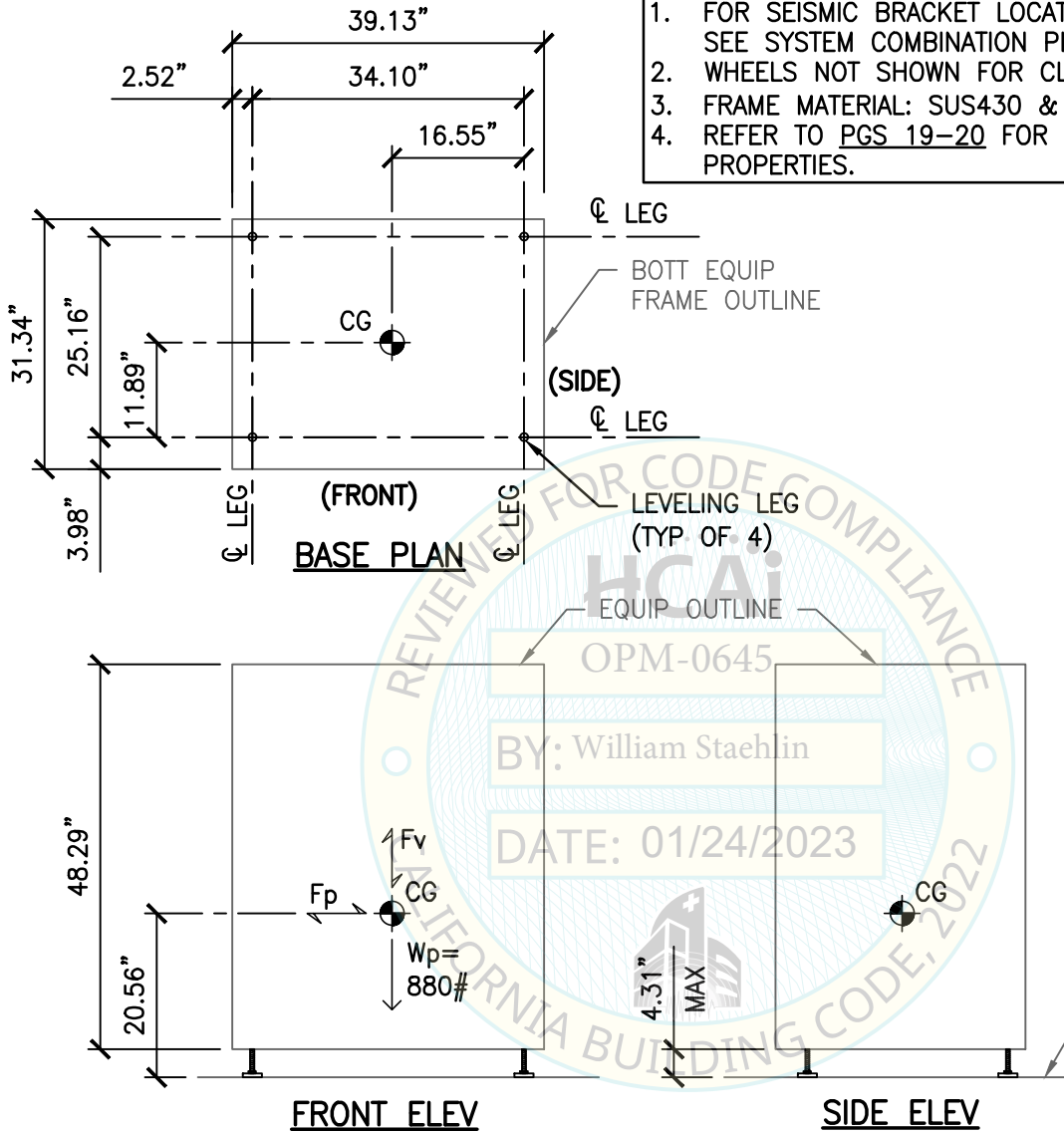
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REVIEWED FOR CODE COMPLIANCE
 HCAI
 OPM-0645
 BY: William Staehlin
 DATE: 01/24/2023
 CALIFORNIA BUILDING CODE, 2022



SHEET TITLE: COMPONENT PLAN & ELEVATIONS
 COBAS CLINICAL CHEMISTRY UNIT (c303)

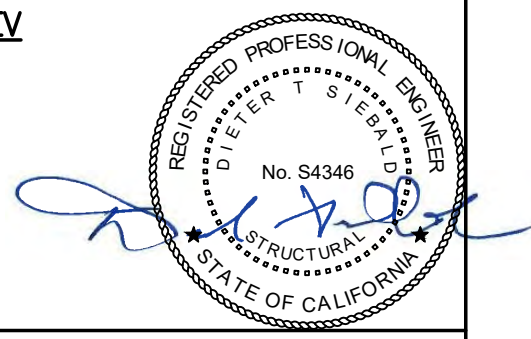
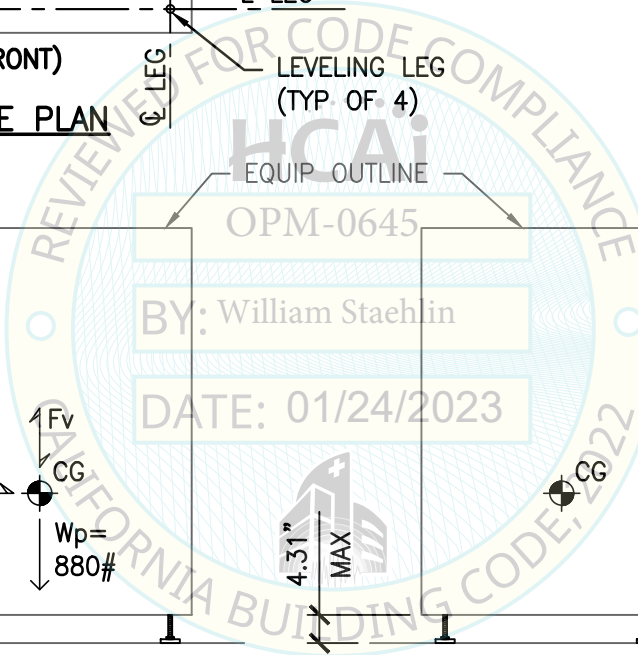
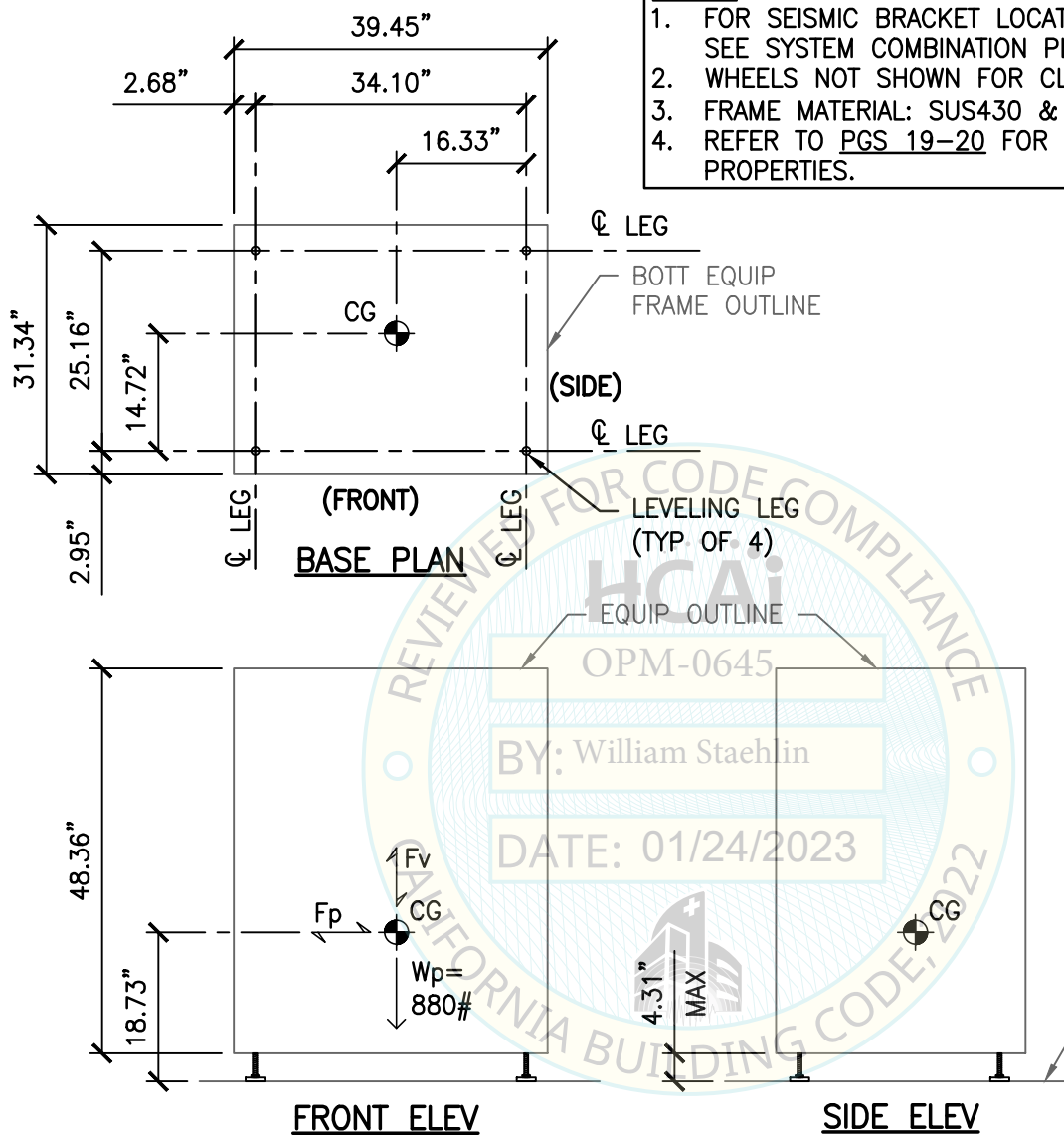
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 4. REFER TO PGS 19-20 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: COMPONENT PLAN & ELEVATIONS
 COBAS IMMUNOASSAY UNIT (e402)

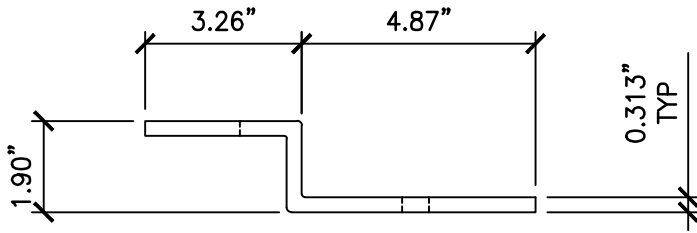
<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076 Date: 12/08/2022 Page: 11 of 20
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM

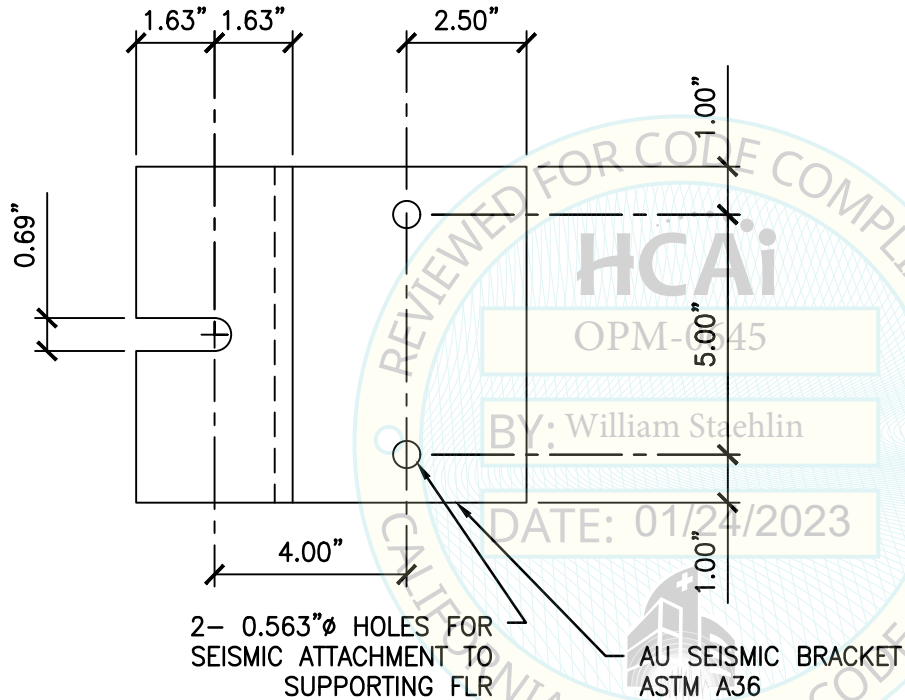


SEISMIC BRACKET #1

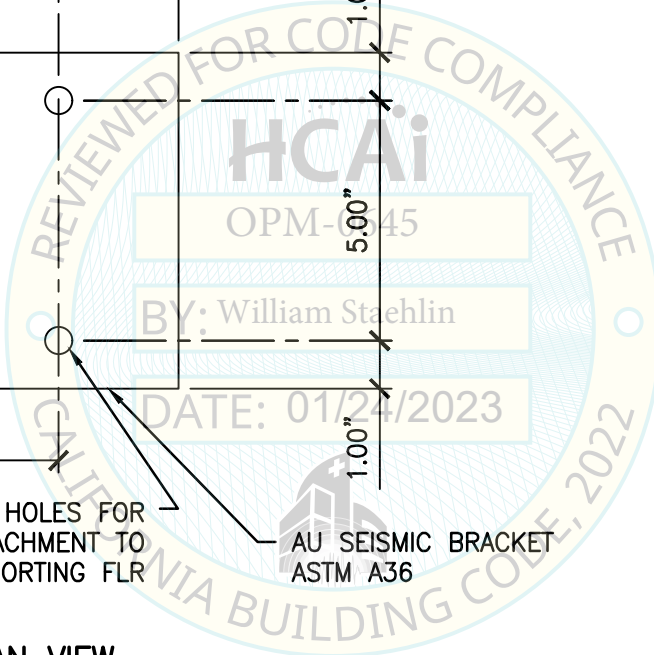


ELEV

- NOTES:**
1. FOR ATTACHMENT TO FLR, SEE PGS 17-20.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



PLAN VIEW



SHEET TITLE: SEISMIC BRACKET #1 DETAIL



CYS STRUCTURAL ENGINEERS, INC.

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 SACRAMENTO, CA 95833

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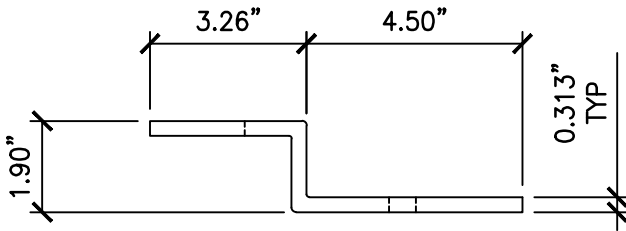
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM

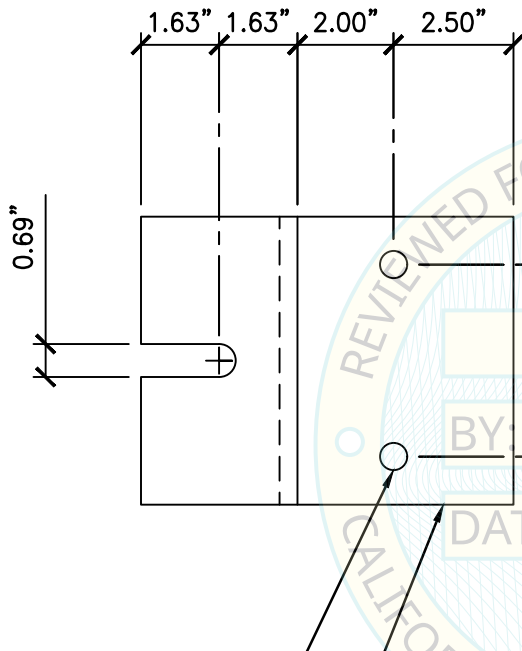


SEISMIC BRACKET #2



ELEV

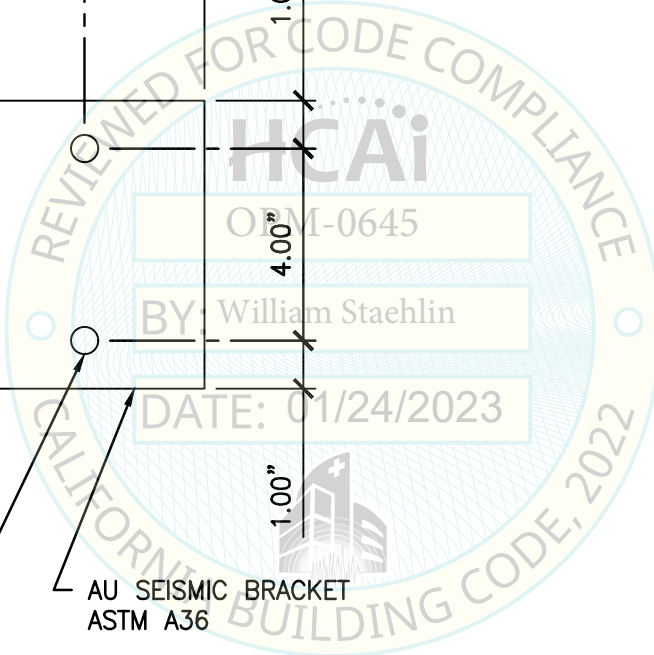
- NOTES:**
1. FOR ATTACHMENT TO FLR, SEE PGS 17-20.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



2- 0.563"Ø HOLES FOR SEISMIC ATTACHMENT TO SUPPORTING FLR

AU SEISMIC BRACKET
 ASTM A36

PLAN VIEW



SHEET TITLE: SEISMIC BRACKET #2 DETAIL



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

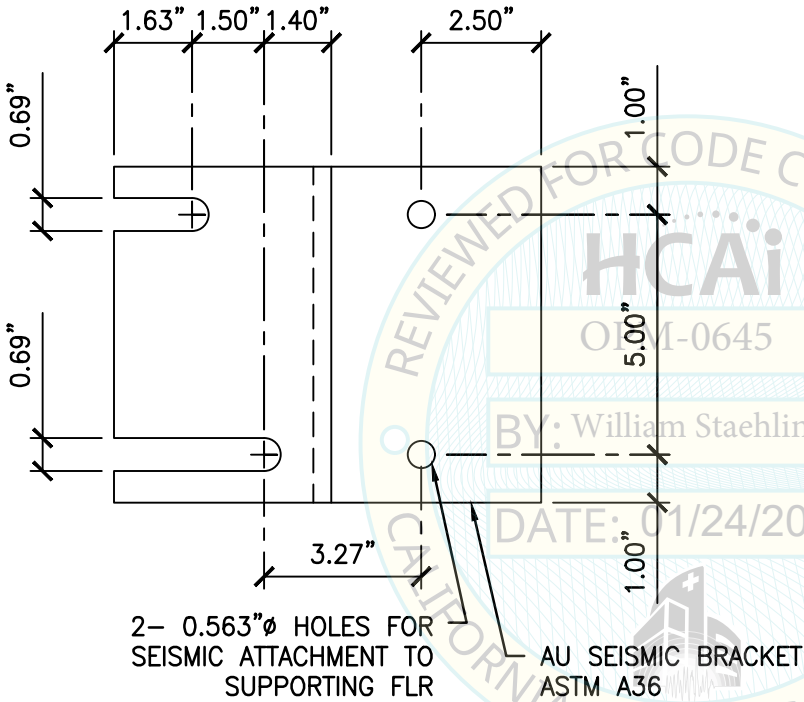
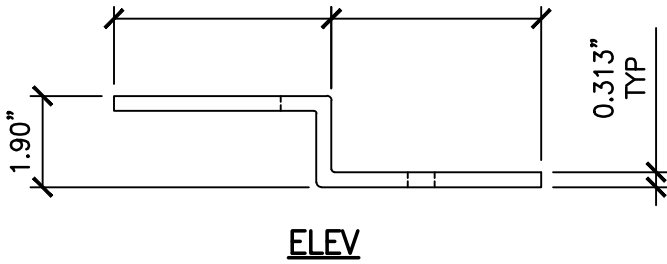
Job No:	22076
Date:	12/08/2022
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM

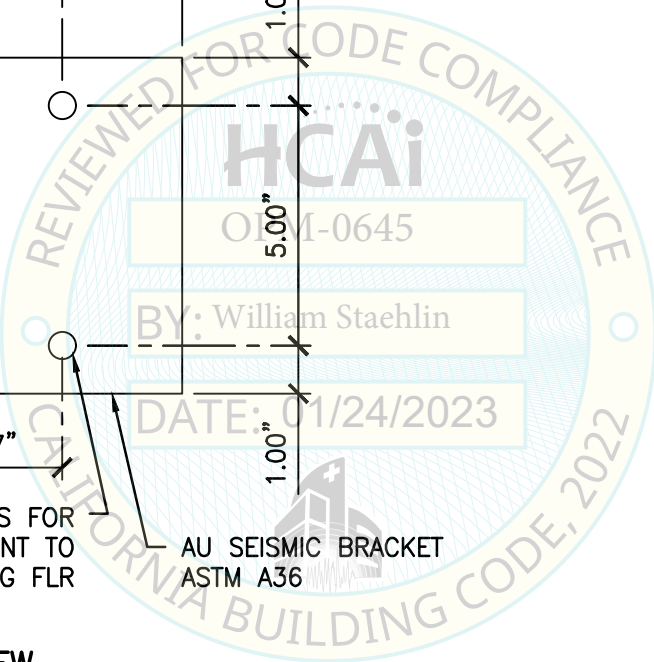


SEISMIC BRACKET #3

- NOTES:**
1. FOR ATTACHMENT TO FLR, SEE PGS 17-20.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



PLAN VIEW



SHEET TITLE: SEISMIC BRACKET #3 DETAIL



CYS STRUCTURAL ENGINEERS, INC.

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 SACRAMENTO, CA 95833

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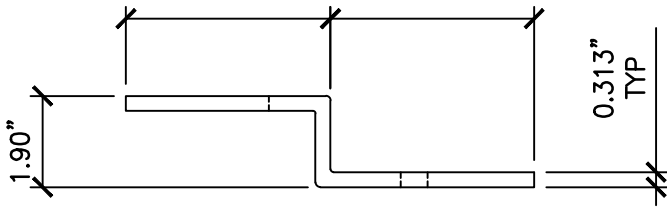
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM

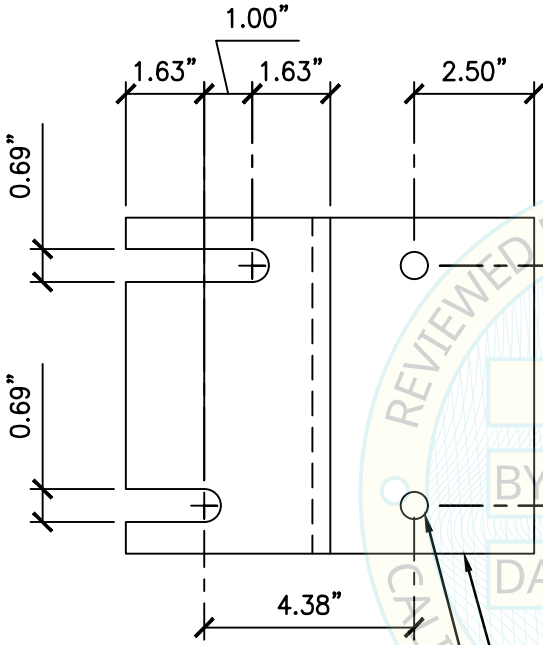


SEISMIC BRACKET #4

- NOTES:**
1. FOR ATTACHMENT TO FLR, SEE PGS 17-20.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



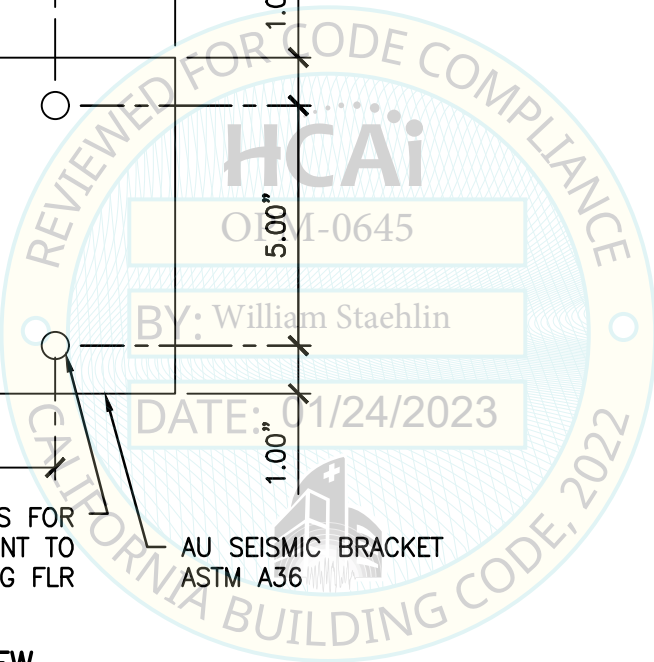
ELEV



2- 0.563"Ø HOLES FOR SEISMIC ATTACHMENT TO SUPPORTING FLR

AU SEISMIC BRACKET
 ASTM A36

PLAN VIEW



SHEET TITLE: SEISMIC BRACKET #4 DETAIL



CYS STRUCTURAL ENGINEERS, INC.

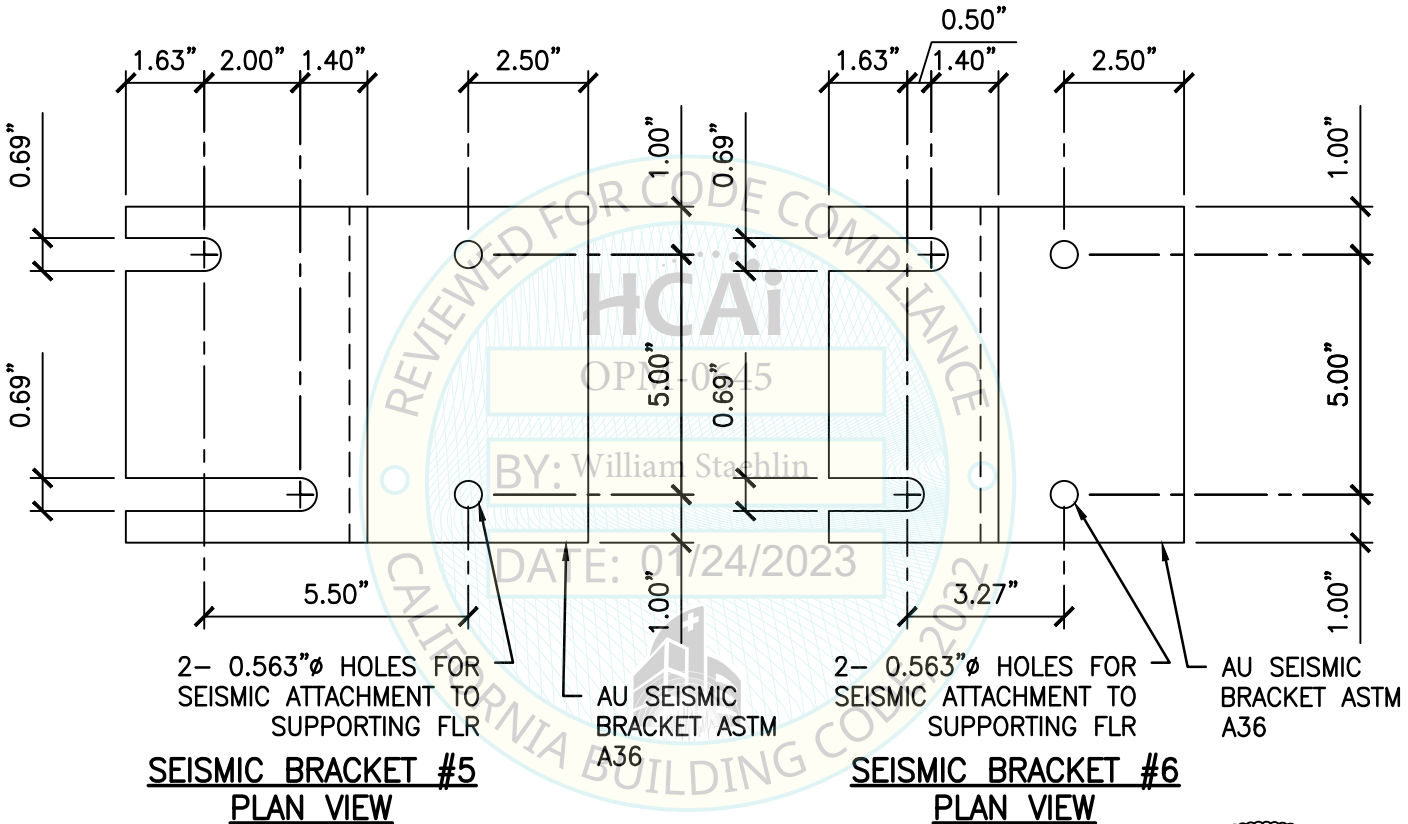
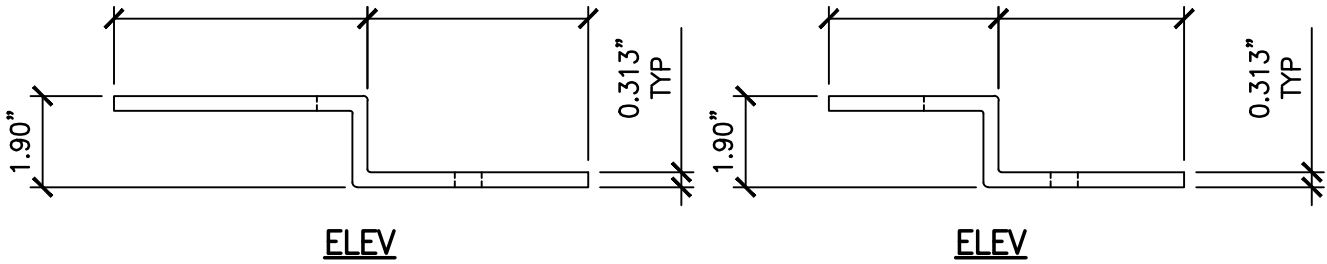
2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

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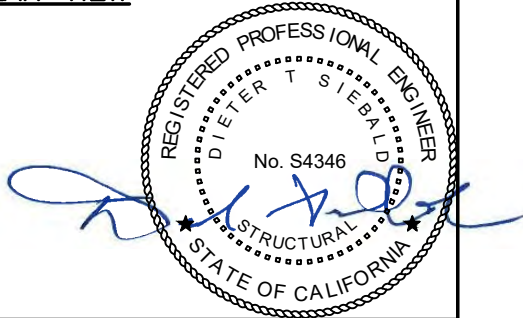
ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



SEISMIC BRACKET #5
PLAN VIEW

SEISMIC BRACKET #6
PLAN VIEW

- NOTES:**
1. FOR ATTACHMENT TO FLR, SEE PGS 17-20.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



SHEET TITLE: SEISMIC BRACKETS #5 & #6 DETAIL

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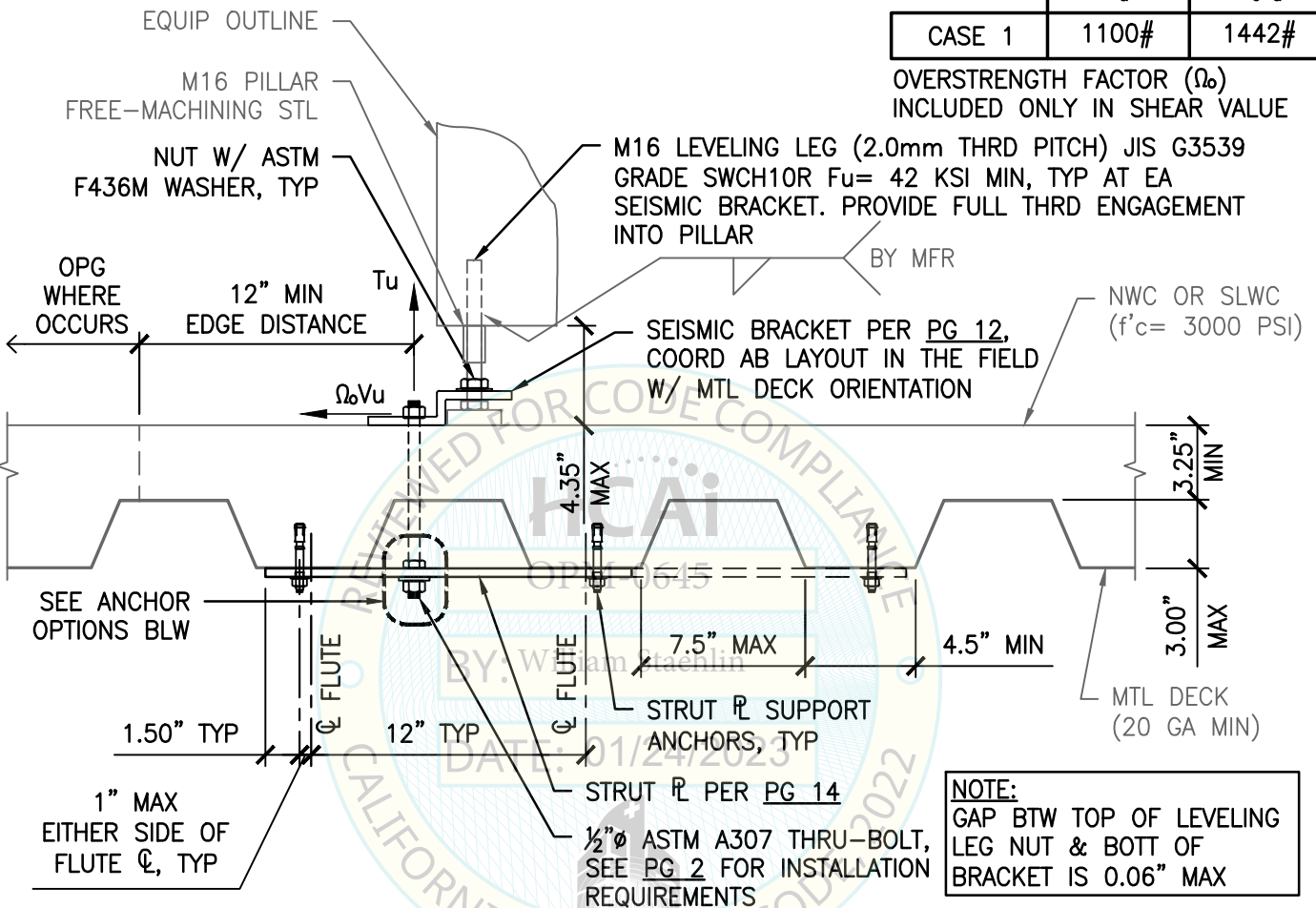
ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



MAX LRFD FORCES
 AT EA BRACKET

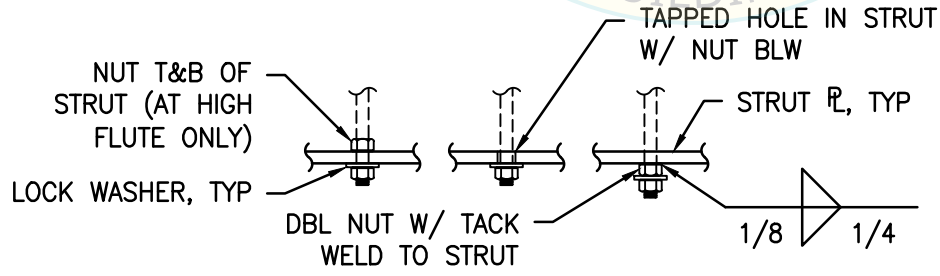
	T_u	$\Omega_o V_u$
CASE 1	1100#	1442#

OVERSTRENGTH FACTOR (Ω_o)
 INCLUDED ONLY IN SHEAR VALUE



NOTE:
 GAP BTW TOP OF LEVELING LEG NUT & BOTT OF BRACKET IS 0.06" MAX

SUSPENDED FLOOR (CASE 1)



ANCHOR OPTIONS

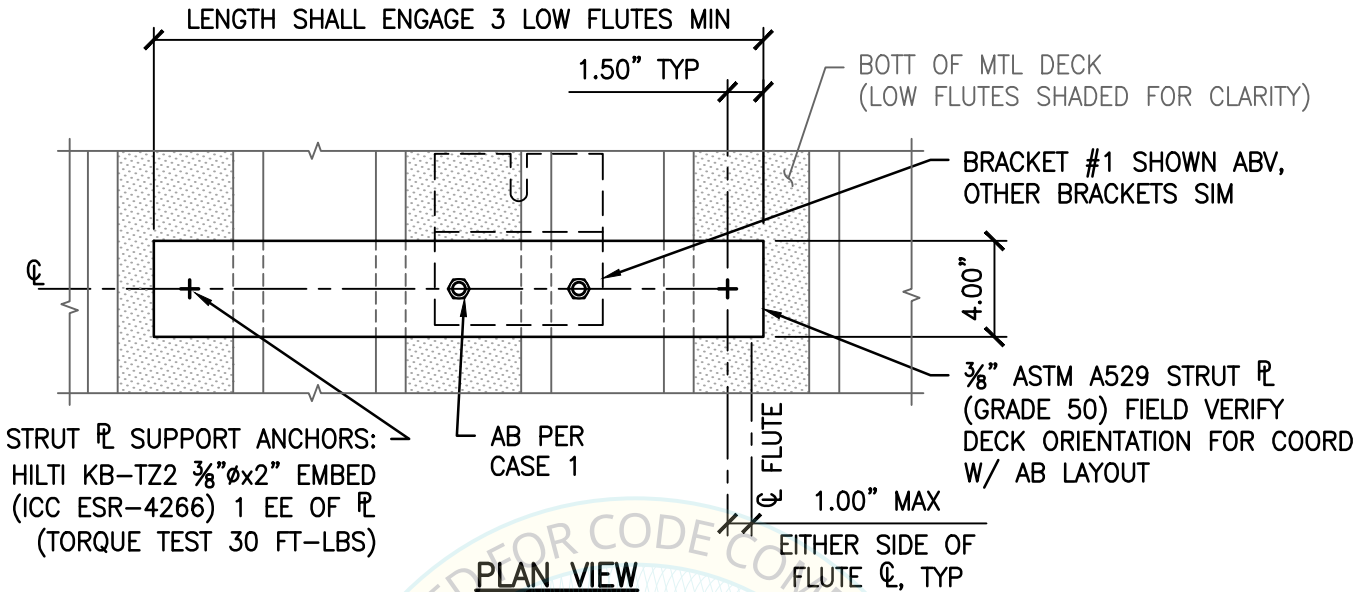


SHEET TITLE: ATTACHMENT DETAIL
 THRU CONCRETE FILL OVER METAL DECK (CASE 1)

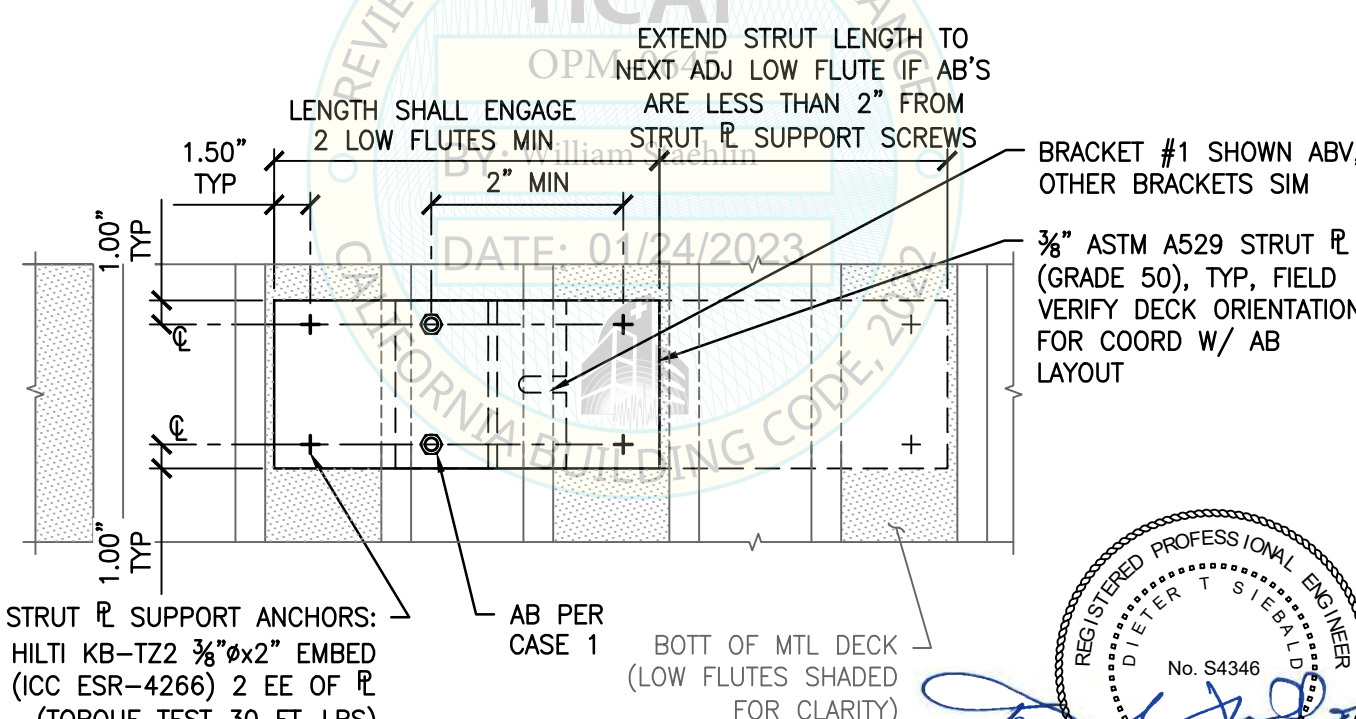
<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076 Date: 12/08/2022 Page: 17 of 20
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



PLAN VIEW
 BRACKET PERP TO FLUTES



PLAN VIEW
 BRACKET PARALLEL TO FLUTES



SHEET TITLE: ATTACHMENT DETAIL
 THRU CONCRETE FILL OVER METAL DECK (CASE 1)

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076 Date: 12/08/2022 Page: 18 of 20
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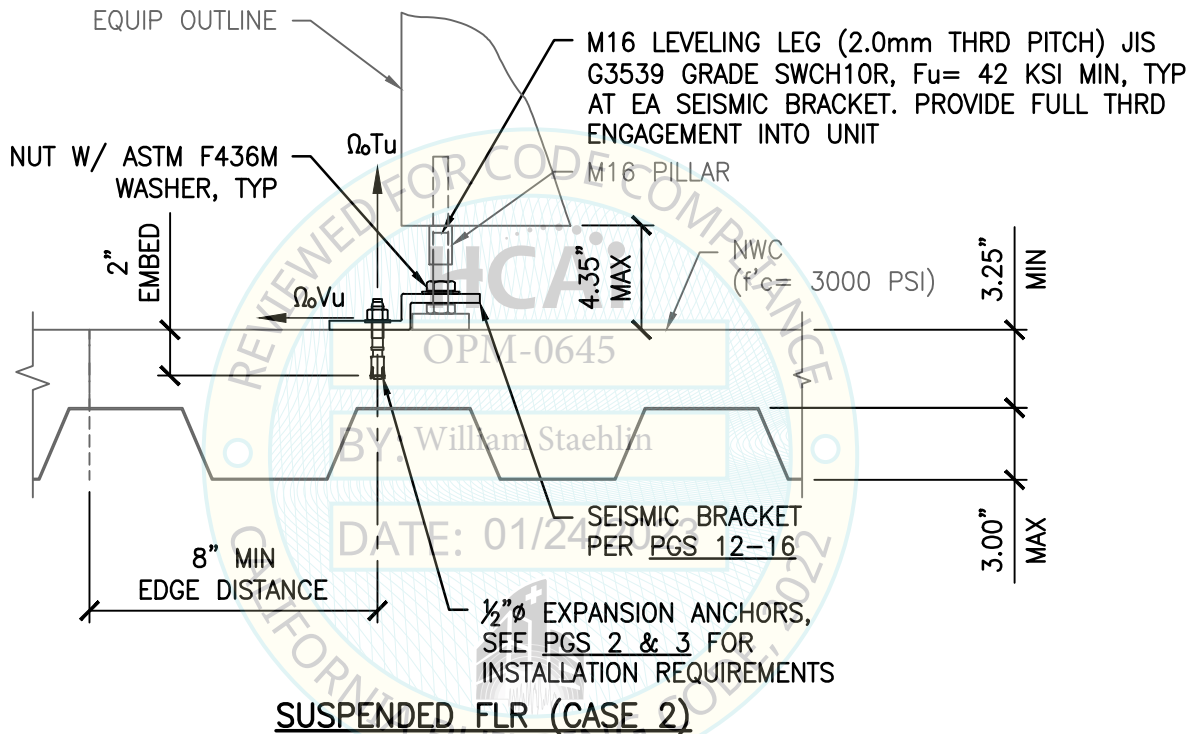
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



	MAX LRFD FORCES AT EA BRACKET	
	$\Omega_o T_u$	$\Omega_o V_u$
CASE 2	833#	172#

OVERSTRENGTH FACTOR (Ω_o) INCLUDED.



EQUIP FRAME MATERIAL:

SUS430, GRADE 430SS, ASTM A240:
 2.3mm THK (13 GA MIN)
 Fy= 30 KSI MIN; Fu= 65 KSI MIN

OR

JFE-CC-EZ-JN 20/20
 2.3mm THK (13 GA)
 Fy= 18.1 KSI MIN; Fu= 39.1 KSI MIN

M16 PILLAR MATERIAL:

@ e402 & c303:
 NCH10RM (SWCH10R)
 Fu= 49 KSI MIN

OR

@ SSU:
 SUS304-CB
 Fy= 29 KSI MIN; Fu= 75 KSI MIN



SHEET TITLE: ATTACHMENT DETAIL
 THRU CONCRETE FILL OVER METAL DECK (CASE 2)

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076
		Date: 12/08/2022
		Page: 19 of 20

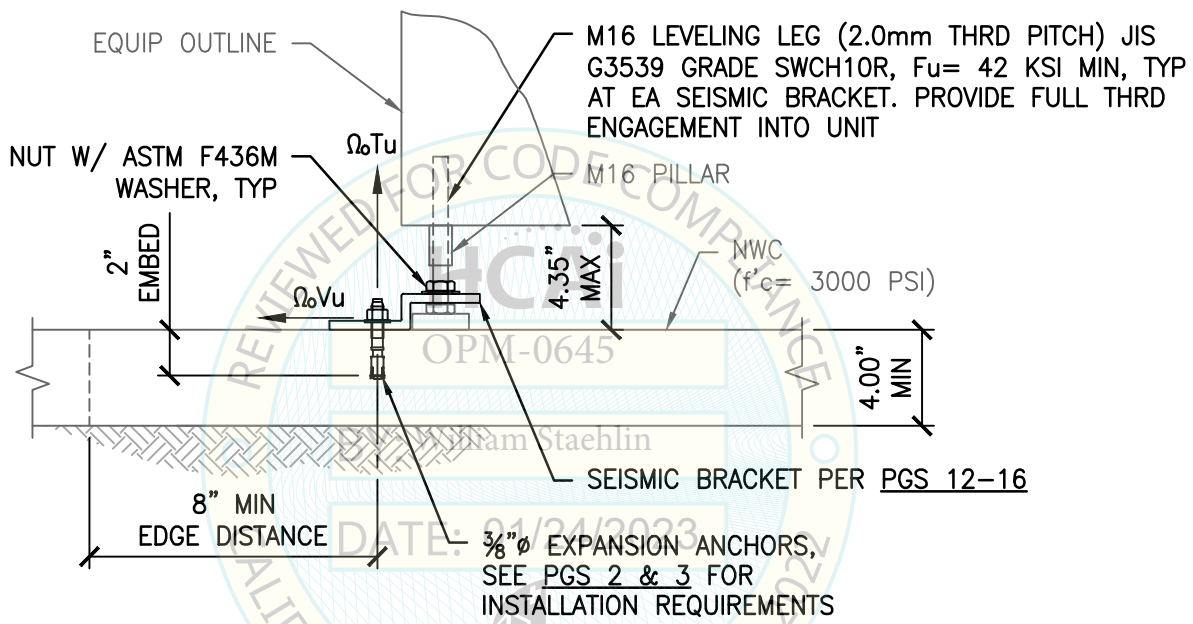
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ROCHE DIAGNOSTICS CORPORATION
ROCHE COBAS PURE SYSTEM



	MAX LRFD FORCES AT EA BRACKET	
	$\Omega_o T_u$	$\Omega_o V_u$
CASE 3	1411#	242#

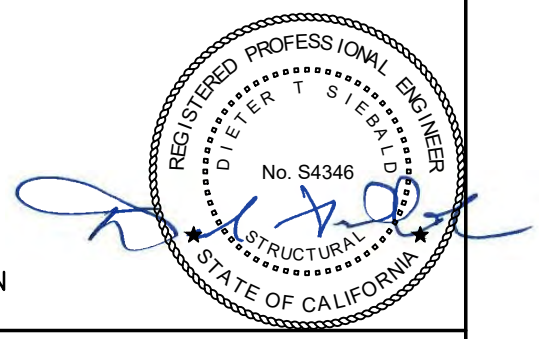
OVERSTRENGTH FACTOR (Ω_o) INCLUDED.



SLAB ON GRADE (CASE 3)

EQUIP FRAME MATERIAL:
 SUS430, GRADE 430SS, ASTM A240:
 2.3mm THK (13 GA MIN)
 Fy= 30 KSI MIN; Fu= 70 KSI MIN
OR
 JFE-CC-EZ-JN 20/20
 2.3mm THK (13 GA)
 Fy= 18.1 KSI MIN; Fu= 39.1 KSI MIN

M16 PILLAR MATERIAL:
 @ e402 & c303:
 NCH10RM (SWCH10R)
 Fu= 49 KSI MIN
OR
 @ SSU:
 SUS304-CB
 Fy= 29 KSI MIN; Fu= 75 KSI MIN



SHEET TITLE: ATTACHMENT DETAIL
 4" CONCRETE SLAB ON GRADE (CASE 3)

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 22076
		Date: 12/08/2022
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