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

OFFICE USE ONLY
APPLICATION #: OPM-0140-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: Roche Diagnostics Corporation

Manufacturer's Technical Representative: Robert A. Jones

Mailing Address: P.O. Box 50457, Indianapolis, IN 46250-457

Telephone: 317-521-3244 Email: Robert.jones@roche.com

Product Information

Product Name: cobas 8100 Automated Work Flow Series

Product Type: Pre-Analytic Analyzers

Product Model Number: RSF, AOB, OBM, IPB, ACU, ACB, DSP, BCL, AQM, RFM

General Description: Pre-analytical sample preparation

Applicant Information

Applicant Company Name: Roche Diagnostics Corporation

Contact Person: Robert A. Jones

Mailing Address: P.O. Box 50457, Indianapolis, IN 46250-457

Telephone: 317-521-3244 Email: Robert.jones@roche.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: Robert A Jones Date: September 8, 2014

Title: Manager-Field Engineering Support Company Name: Roche Diagnostics Corporation

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS Structural Engineers, Inc.

Name: Dieter T. Siebald California License Number: S 4346

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-
(Separate application for OSP is required)

☐ Special Seismic Certification is not preapproved

Certification Method(s)

☐ Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-10

☐ Other* (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2013 (CBSC 2013) 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 2013 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

List of Attachments Supporting the Manufacturer's Certification

☐ Test Report ☒ Drawings ☒ Calculations ☐ Manufacturer's Catalog

☒ Other(s) (Please Specify): Manufacturer's Equipment Drawings and Documents (attached to Calculations)

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2013 ONLY

Signature: Date: 01/07/2015

Print Name: William Staehlin

Title: SSE

Condition of Approval (if applicable):

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NOTES:

1. THESE DRAWINGS ARE PREPARED FOR ROCHE DIAGNOSTICS CORPORATION, INDIANAPOLIS, INDIANA.
2. THE CONTRACTOR AND INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE OSHPD PRE–APPROVAL PROGRAMS WEBSITE.
3. THIS PRE–APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE UNIT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT UNITS ARE SUPPLIED BY ROCHE. THE SEISMIC BRACKETS, THROUGH BOLTS & EXPANSION ANCHORS SHOWN ON PAGES 18–21 SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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:	14085.03
Date:	12/19/2014
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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2013. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2013.
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 EXISTING STRUCTURE TO RESIST THE FORCES AND WEIGHT SPECIFIED FOR EACH EQUIPMENT IN ADDITION TO ALL OTHER LOADS. PROVIDE AND 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 FLOOR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN THE TEST LOADS TABLE ON PAGE 3 IS THE REQUIRED MINIMUM SPACING OF THE ½" DIAMETER ANCHOR BOLTS. THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS AND EMBEDMENTS MAY VARY AND SHALL BE EVALUATED BY THE SEOR.
   - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE CBC 2013 AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
   - E. THAT THE ACTUAL EQUIPMENT'S WEIGHT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, AND THE MATERIAL AND GAGE OF THE EQUIPMENT WHERE ATTACHMENTS ARE MADE, AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
3. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONCRETE SHALL BE CARBON STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ESR-1917 REISSUED MAY 2013, CORRECTED AUGUST 2014.
   - A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR AND THE PARAMETERS GIVEN IN THE TABLE ON PAGE 3.
   - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE WITH THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TEST 50% OF THE INSTALLED ANCHORS. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION OR TORQUE IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES OR CALIBRATED TORQUE WRENCH METHOD. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD. 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 EQUIPMENT INSTALLATION. ALSO REFER TO CBC 1913A.7 "FIELD TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
   - C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
     - HYDRAULIC RAM METHOD: APPLY AND HOLD TEST LOAD FOR A MINIMUM OF 15 SECONDS. THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD WHERE WASHERS ARE USED. FOR WEDGE TYPE ANCHORS, SUCH AS HILTI KB-TZ, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
     - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE: ONE-HALF (½) TURN OF THE NUT.

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SHEET TITLE: GENERAL NOTES

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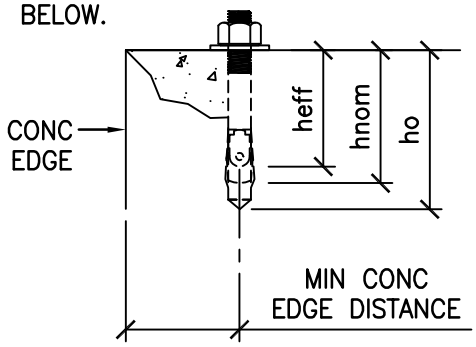
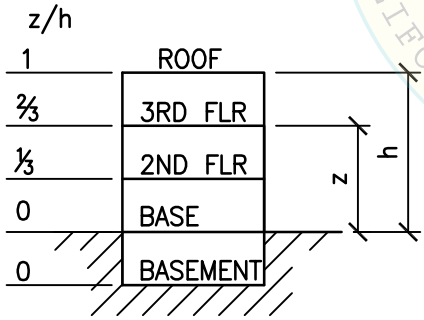
GENERAL NOTES CONTINUED:

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



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		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT–LBS)	
½	2⅜	2	2⅝	4	12	6	1584	40	CASE 2

4. BOLTS THROUGH CONCRETE ON METAL DECK:
   A. BOLTS SHALL BE TORQUED BY ¾ TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNLESS NOTED OTHERWISE.
   B. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
   C. THROUGH BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION & TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST–INSTALLED ANCHORS.
5. TWO (2) CASES OF ATTACHMENT ARE SPECIFIED AND PRESENTED IN THIS PRE–APPROVAL:



BUILDING ELEVATION

CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLOORS ABOVE THE BASE OF A BUILDING ($z/h \leq 1.0$), IT IS ASSUMED THAT THE FLOORS ARE BUILT OF A MINIMUM 3¼" SAND–LIGHTWEIGHT CONCRETE TOPPING OVER METAL DECK (f'c = 3000 PSI, MINIMUM).

CASE 2: ATTACHMENT DETAILS LOCATED AT OR BELOW THE BASE OF A BUILDING ($z/h=0$). THE FLOORS ARE ASSUMED TO BE BUILT OF A MINIMUM 4" NORMAL–WEIGHT CONCRETE SLAB (f'c = 3000 PSI, MINIMUM).

6. 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.

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SHEET TITLE: GENERAL NOTES (CONTINUED)

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SYSTEM OVERVIEW & DESIGN CRITERIA

1. THE cobas 8100 AUTOMATED WORK FLOW SERIES CONSISTS OF THE FOLLOWING MAJOR COMPONENTS:
   - INPUT BUFFER (IPB) – SAMPLES ARE INPUT INTO THE INSTRUMENT HERE. ID IS READ & SCHEDULE DETERMINED.
   - OUTPUT BUFFER (OBS) – SAMPLES ARE OUTPUT FROM THE INSTRUMENT
   - ADD ON BUFFER (AOB) – SAMPLES ARE TEMPORARILY STORED HERE FOR UP TO 3 HOURS FOR REPEATS TEST ORDERS
   - RESTOPPER (RSF) – SAMPLES ARE RECAPPED
   - DESTOPPER (DSP) – SAMPLES ARE DECAPPED
   - CENTRIFUGE BUFFER (ACB/ACU) – SAMPLES ARE PREPARED TO LOAD & UNLOAD FROM THE CENTRIFUGE WITH INTERNAL ACU CENTRIFUGE.
   - BARCODE LABELER (BCL) – DAUGHTER SAMPLES ARE BARCODED AND LABELED
   - ALIQUOT MODULE (AQM) – SAMPLES ARE DIVIDED INTO DAUGHTER SAMPLES IF NECESSARY
   - REFORMATTER (RFM) – SAMPLES ARE MOVED FROM SINGLE CARRIER TO ALTERNATE CARRIERS AND BACK. THESE ARE PLACED BEFORE ANY ANALYTICAL SYSTEM IN ORDER THE SAMPLES CAN RUN ON THE ATTACHED SYSTEM.

2. SCHEMATIC OVERVIEW DRAWINGS FOLLOW THAT SHOW THREE DIFFERENT MULTI MODULE SYSTEM CONFIGURATIONS. MODULE COMBINATIONS AND ORDER MAY VARY FROM THAT SHOWN.

3. ATTACHMENT DESIGN IS PER 2013 CBC AT LRFD LEVEL FORCES.

   FLOOR MOUNTED MECHANICAL EQUIPMENT PER ASCE 7-10 TABLE 13.6-1.

   $a_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$ $\Omega_0 = 1.5$ (CONCRETE ANCHORS)

   W_P AS NOTED ON EQUIPMENT DRAWINGS SHOWN ON PGS 9 TO 17.

   FOR CASE 1 – UPPER FLOORS ABOVE THE BASE, $z/h \leq 1.0$
   $S_{DS} = 2.50$ $F_p = 3.00\ W_p$ $F_v = 0.50\ W_p$

   FOR CASE 2 – SLAB AT OR BELOW BASE, $z/h = 0$
   $S_{DS} = 2.50$ $F_p = 1.125\ W_p$ $F_v = 0.50\ W_p$

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SHEET TITLE: SYSTEM OVERVIEW & DESIGN CRITERIA

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ABBREVIATIONS:

@	AT
ABV	ABOVE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BLW	BELOW
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
CONC	CONCRETE
DBL	DOUBLE
DIA (ø)	DIAMETER
(E)	EXISTING CONDITION
ELEV	ELEVATION
EQUIP	EQUIPMENT
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLR	FLOOR
FT (')	FOOT/FEET
Fy	SPECIFIED YIELD STRENGTH OF REINFORCING, PS OF STEEL, KSI
GA	GAUGE
IN (")	INCH
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PG(S)	PAGE(S)
PSI	POUNDS PER SQUARE INCH
STL	STEEL
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
THRD	THREAD OR THREADED
TYP	TYPICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
W/	WITH
W/O	WITHOUT
Wp	OPERATING WEIGHT
WT	WEIGHT

SHEET TITLE: ABBREVIATIONS & DESIGN CRITERIA

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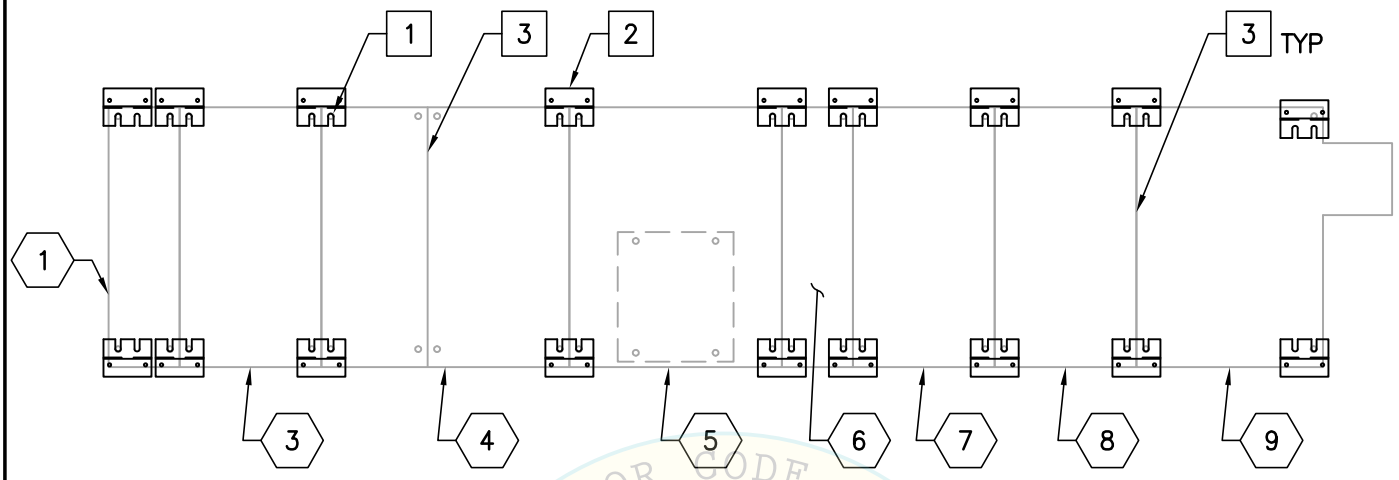
ROCHE DIAGNOSTICS CORPORATION
cobas® 8100 AUTOMATED WORK FLOW SERIES



COMPONENT	
1	(RSF) PER PG 9
2	(AOB) PER PG 10
3	(OBS) PER PG 11
4	(IPB) PER PG 12
5	(ACB/ACU) PER PG 13
6	(DSP) PER PG 14
7	(BCL) PER PG 15
8	(AQM) PER PG 16
9	(RFM) PER PG 17

KEY NOTES	
1	LEVELING LEG, TYP
2	SEISMIC BRACKET PER PG 18, TYP
3	SIDE BY SIDE UNITS ARE CONNECTED AT FOUR POINTS FRONT & BACK (8 TOTAL), BY THE MFR, USING AN M8x20mm SUS304 GR 5 BOLT, TYP

NOTE:
MODULE COMBINATIONS & ORDER MAY VARY.

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SHEET TITLE: MULTI MODULE SYSTEM COMBINATION PLAN 1

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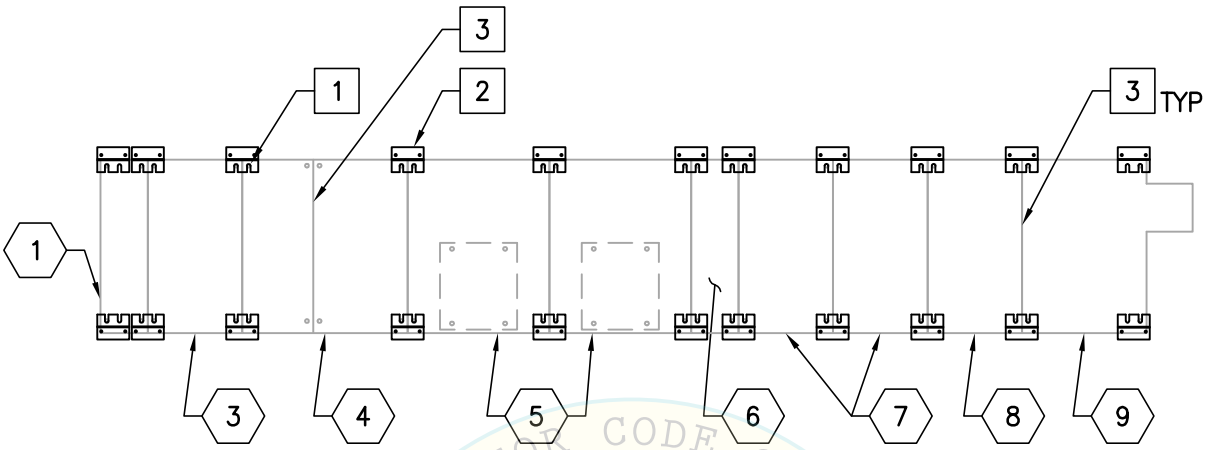

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SHEET TITLE: MULTI MODULE SYSTEM COMBINATION PLAN 2

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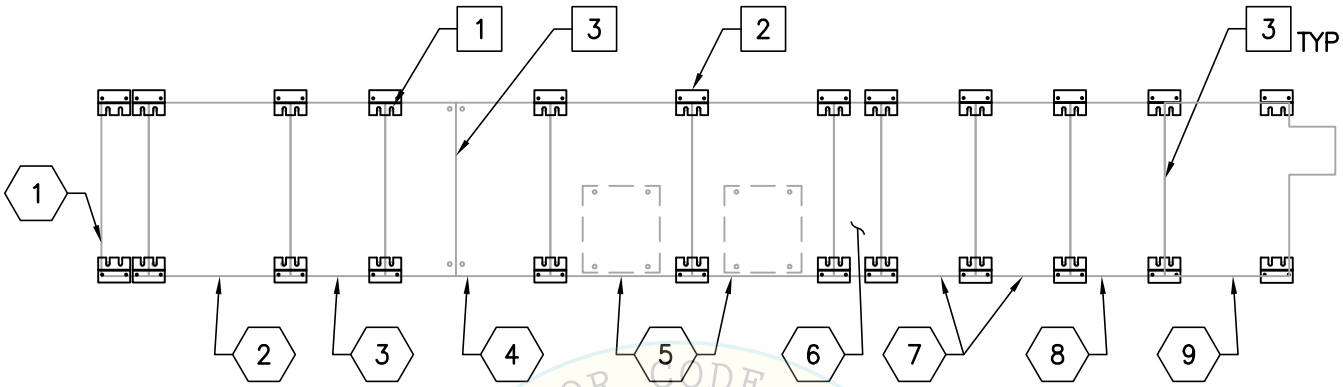

COMPONENT	
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SHEET TITLE: MULTI MODULE SYSTEM COMBINATION PLAN 3

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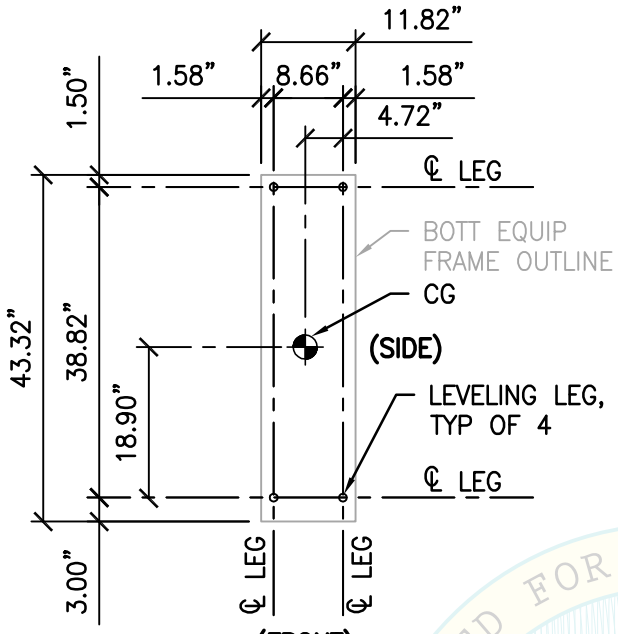

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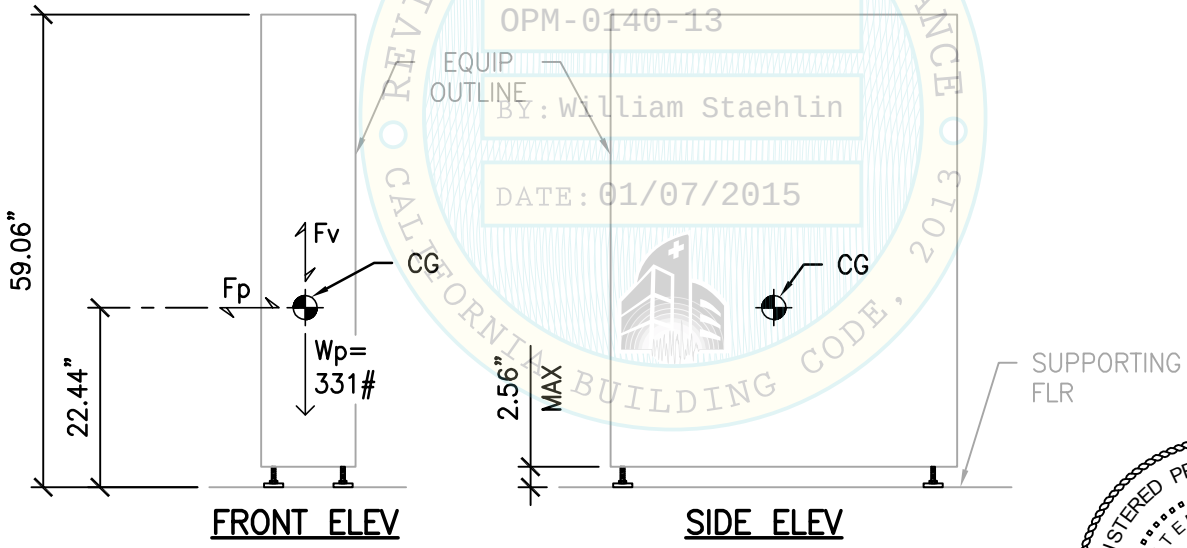

FRONT ELEV

SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
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SHEET TITLE: RESTOPPER (RSF)
PLAN & ELEVATIONS

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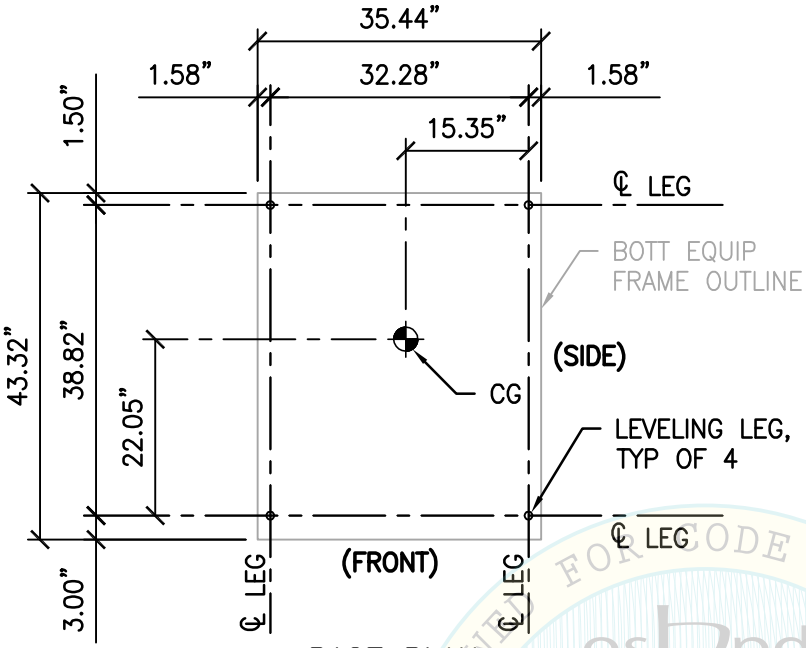

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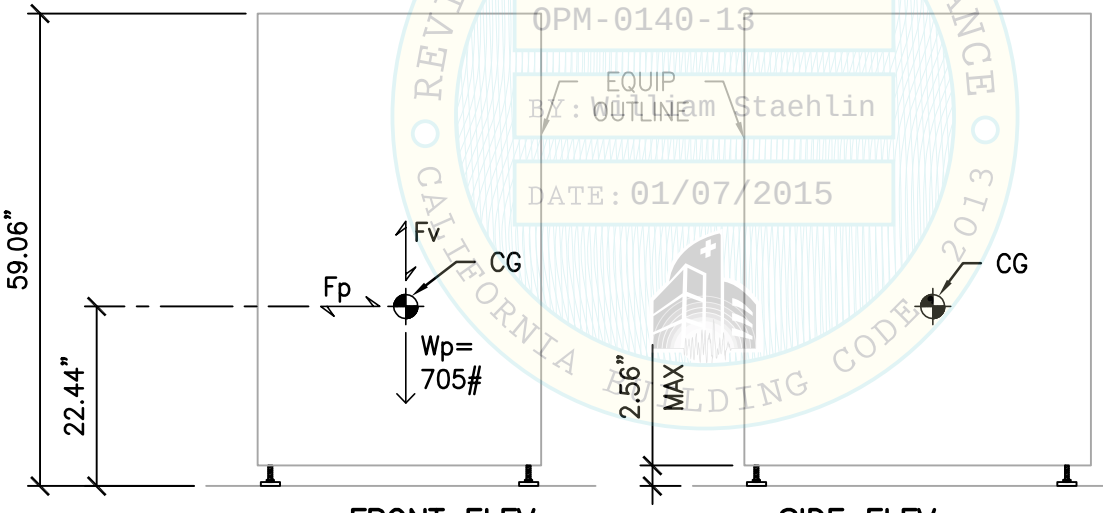

FRONT ELEV SIDE ELEV

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REGISTERED PROFESSIONAL ENGINEER
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SHEET TITLE: ADD ON BUFFER (AOB)
PLAN & ELEVATIONS

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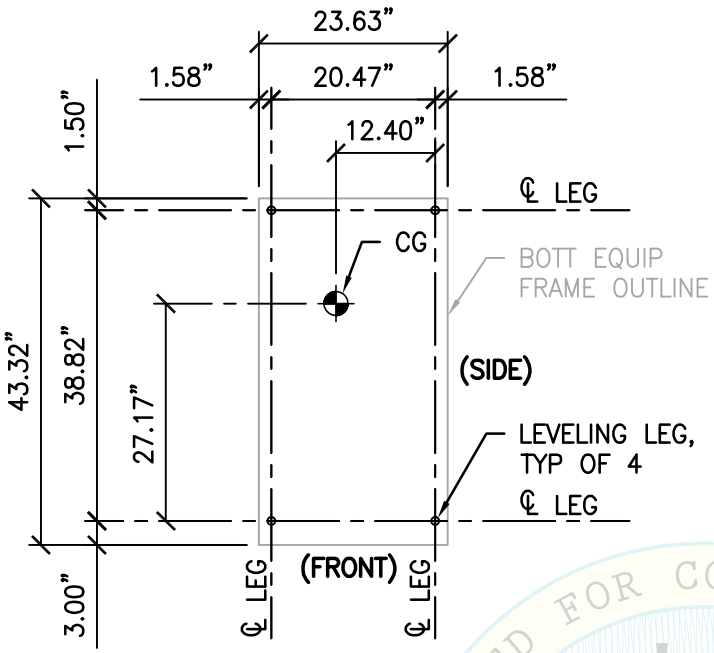
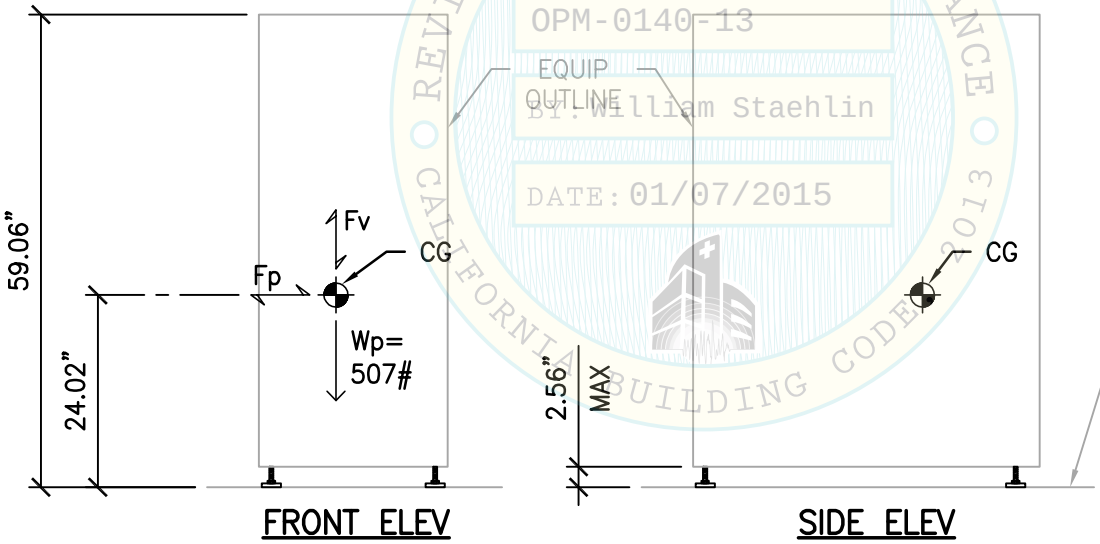


BASE PLAN



FRONT ELEV

SIDE ELEV

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SHEET TITLE: OUTPUT BUFFER (OBS)
PLAN & ELEVATIONS

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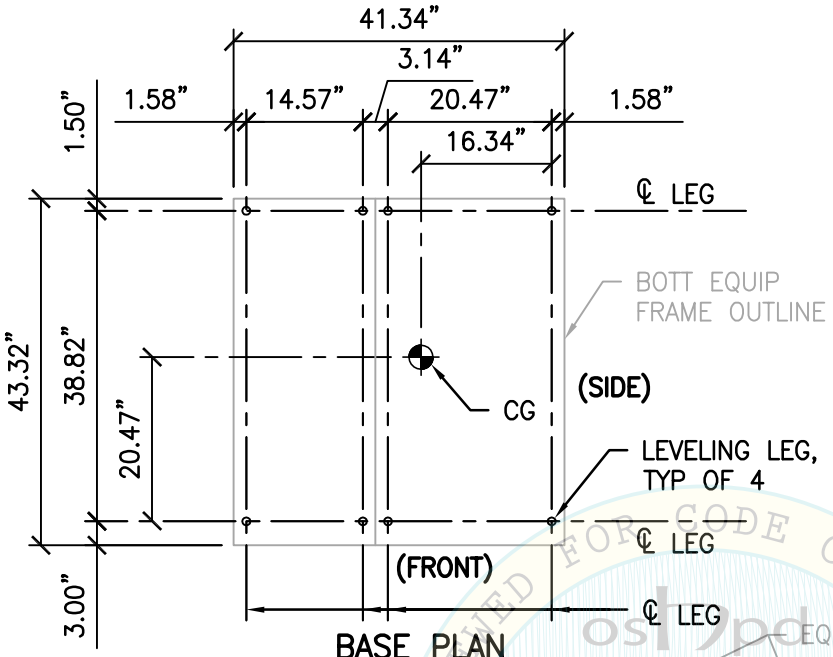
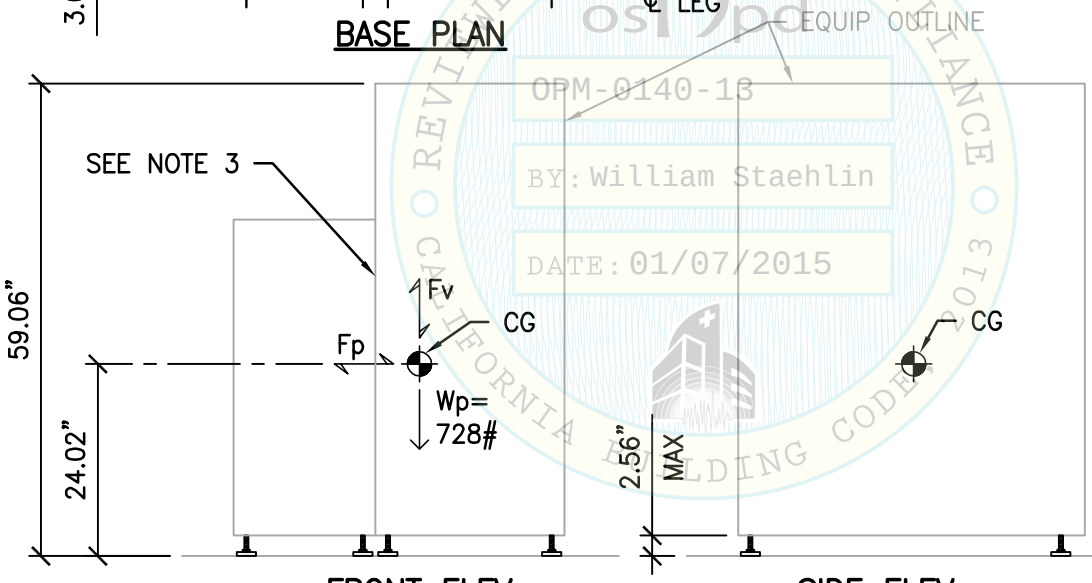


BASE PLAN



FRONT ELEV SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.
3. SEE KEY NOTE 3 ON PG 5.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: INPUT BUFFER (IPB)
PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

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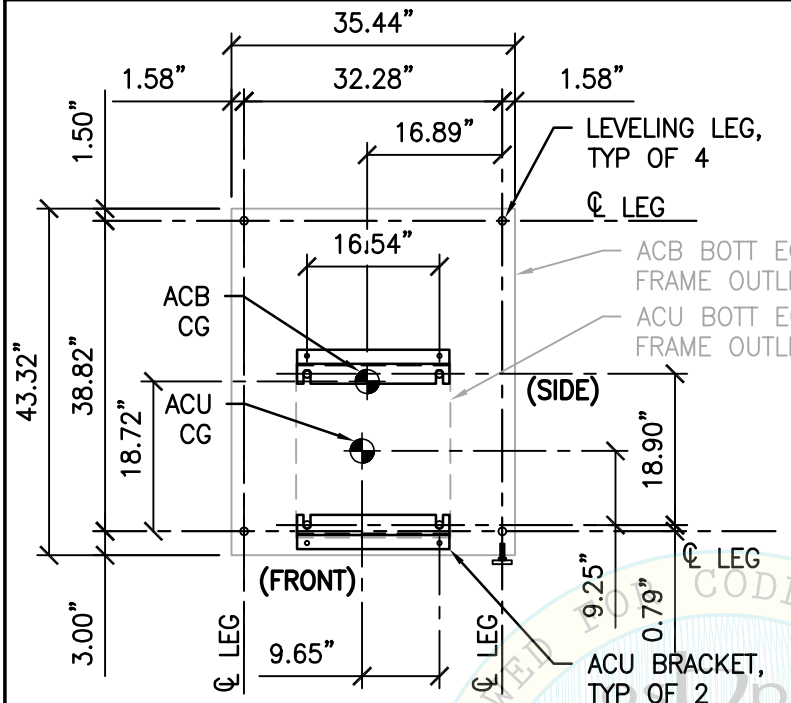
ROCHE DIAGNOSTICS CORPORATION

cobas® 8100 AUTOMATED WORK FLOW SERIES



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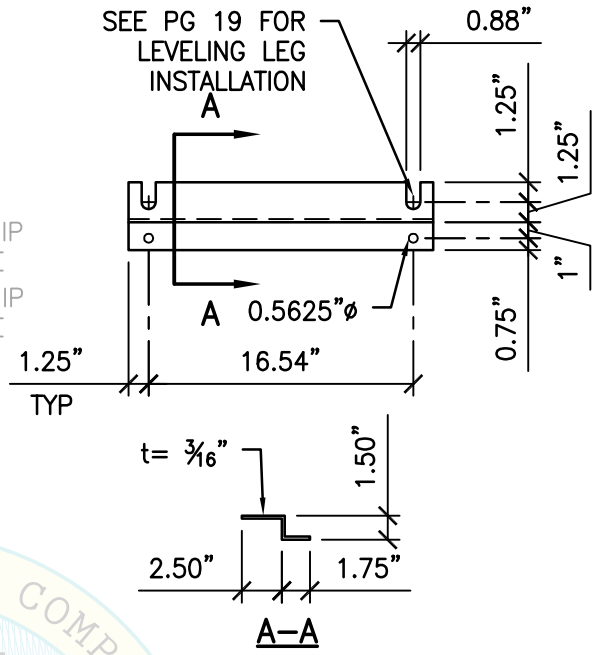
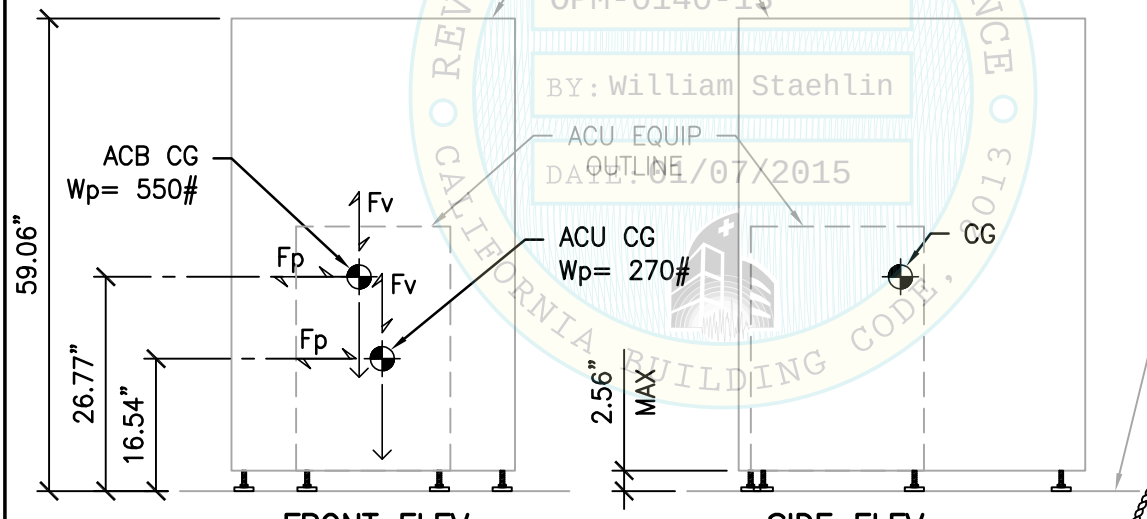


A–A

ACU BRACKET DTL



FRONT ELEV

SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: CENTRIFUGE BUFFER (ACB/ACU) PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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ROCHE DIAGNOSTICS CORPORATION
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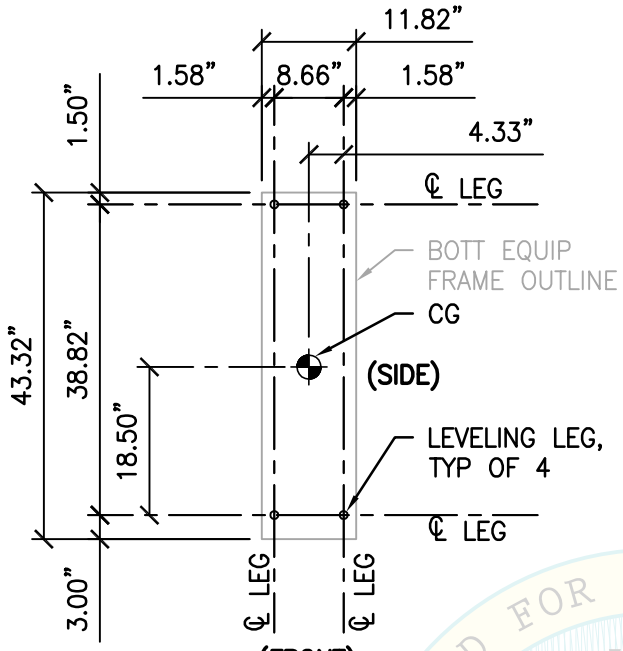

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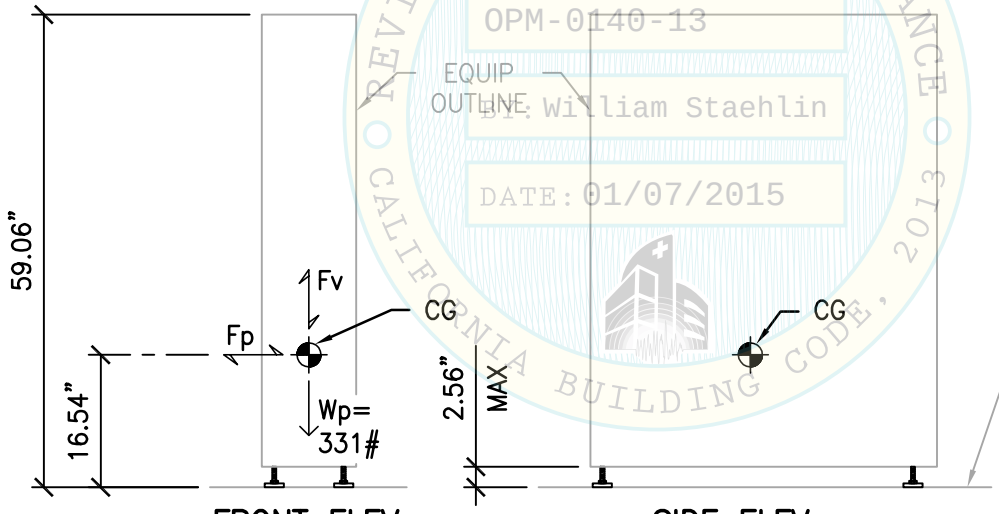

FRONT ELEV

SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: DESTOPPER (DSP)
PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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ROCHE DIAGNOSTICS CORPORATION
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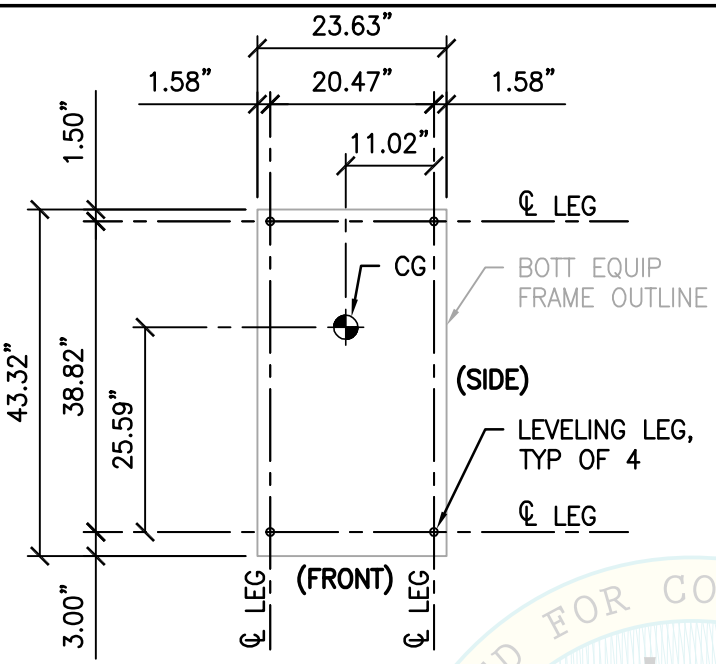
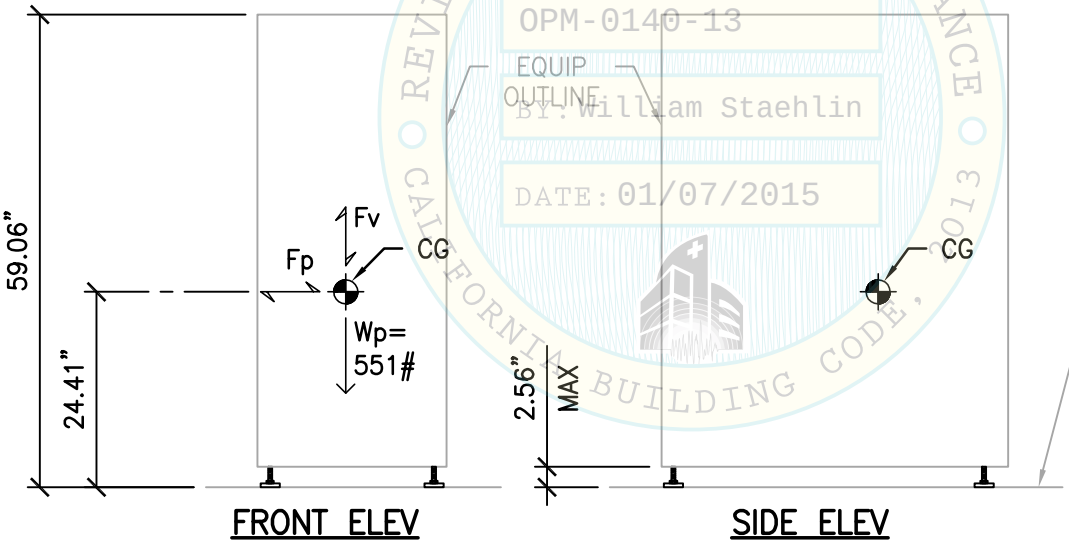


BASE PLAN



FRONT ELEV

SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: BAR CODE LABELER (BCL)
PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
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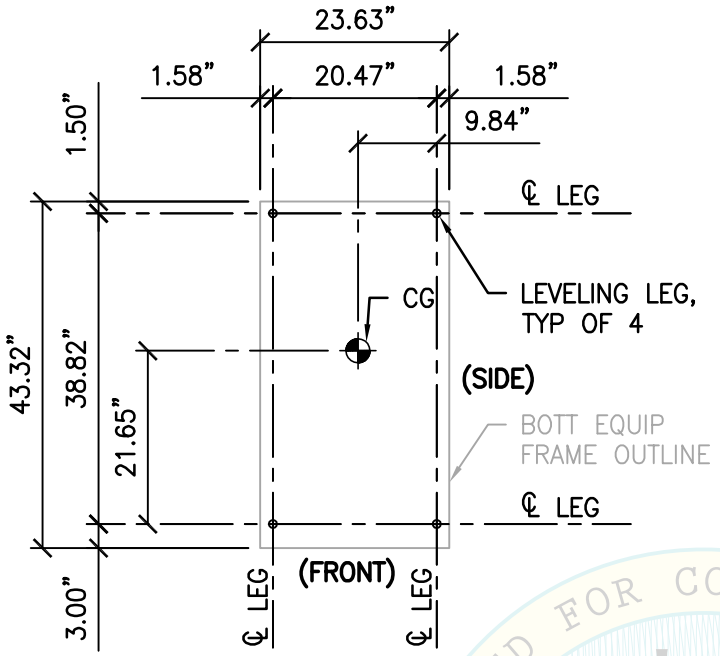
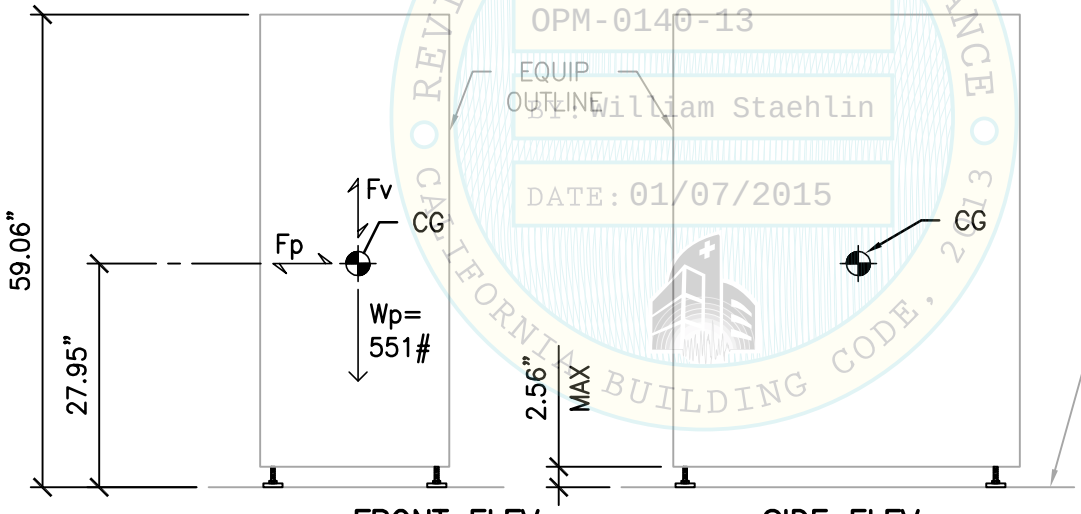


BASE PLAN



FRONT ELEV SIDE ELEV

NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: ALIQUOT MODULE (AQM)
PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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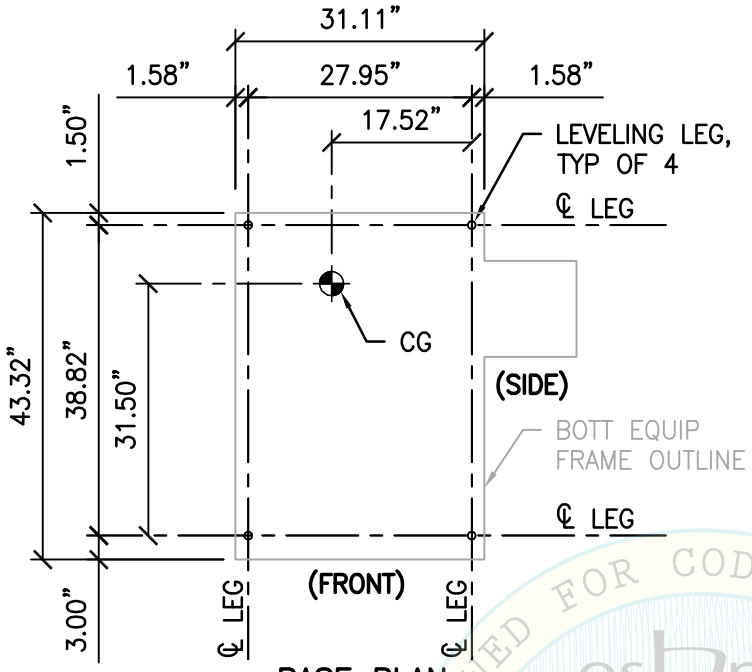
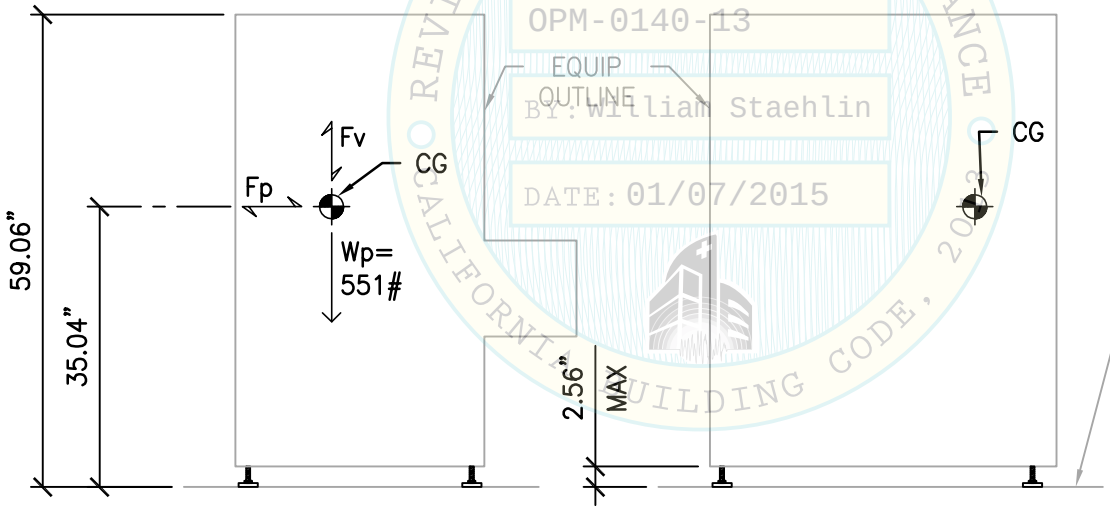


BASE PLAN



FRONT ELEV

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NOTES:
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE MULTI MODULE SYSTEM COMBINATION PLANS.
2. WHEELS NOT SHOWN FOR CLARITY.

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: REFORMATTER (RFM)
PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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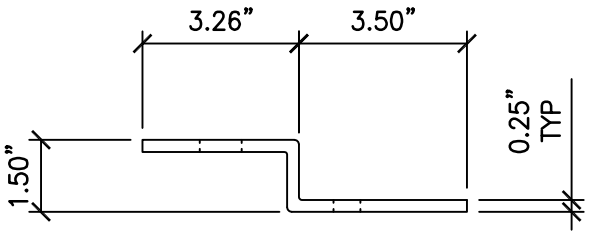

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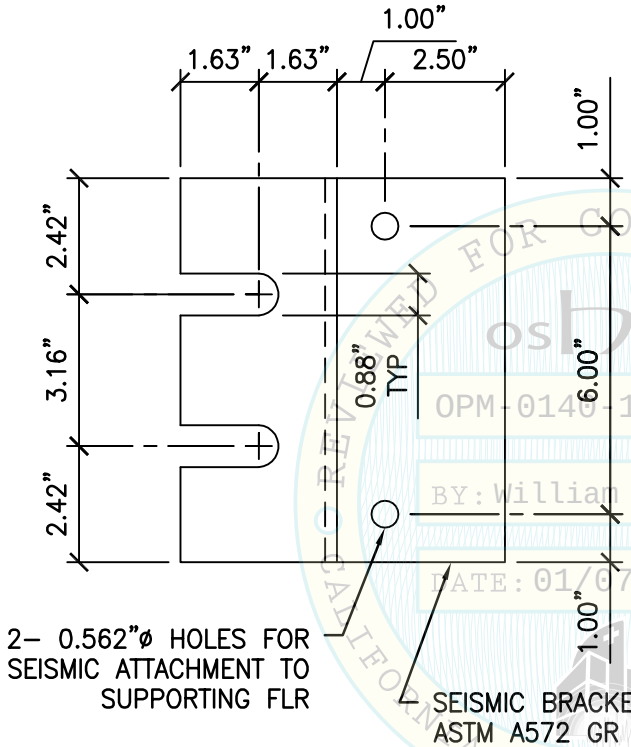

PLAN

NOTES:
1. FOR CASE 1 & CASE 2 ATTACHMENT TO FLR, SEE PAGES 19 & 21.
2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.

SHEET TITLE: SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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TEL (916) 920-2020
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ROCHE DIAGNOSTICS CORPORATION
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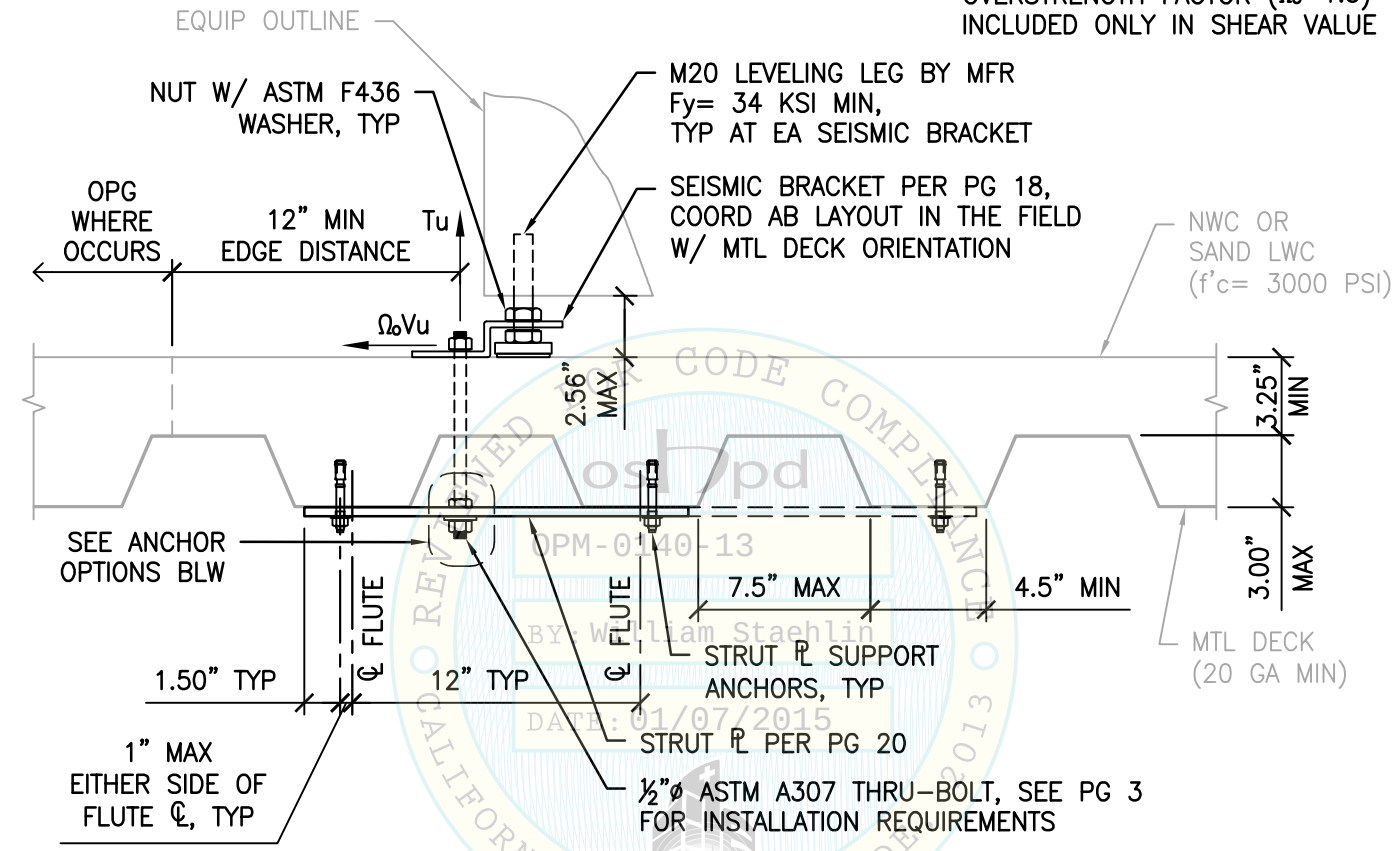
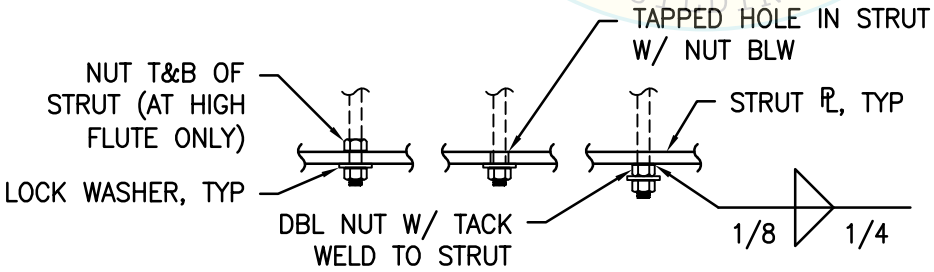
EQUIPMENT FRAME MATERIAL:
GRADE 430SS, ASTM A240: 2.0mm THICK (14 GA)
Fy= 45 KSI MIN; Fu= 70 KSI MIN

	MAX LRFD FORCES AT EA ANCHOR	
	T_u	$\Omega_o V_u$
CASE 1	2647#	1661#

OVERSTRENGTH FACTOR (Ω_o=1.5)
INCLUDED ONLY IN SHEAR VALUE



SUSPENDED FLOOR (CASE 1)



ANCHOR OPTIONS

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

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

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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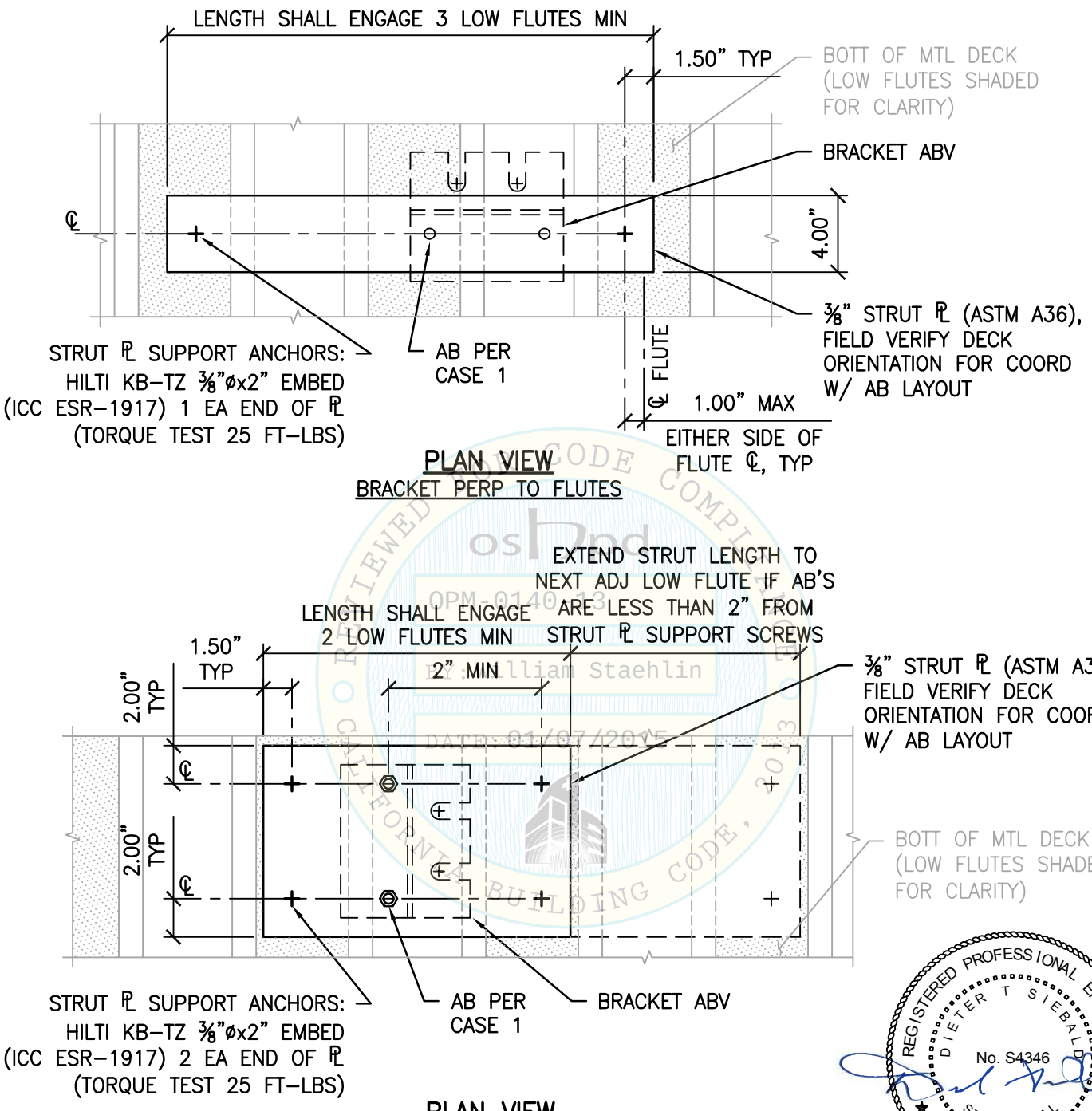
ROCHE DIAGNOSTICS CORPORATION
cobas® 8100 AUTOMATED WORK FLOW SERIES



REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: TYPICAL STRUT DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	14085.03
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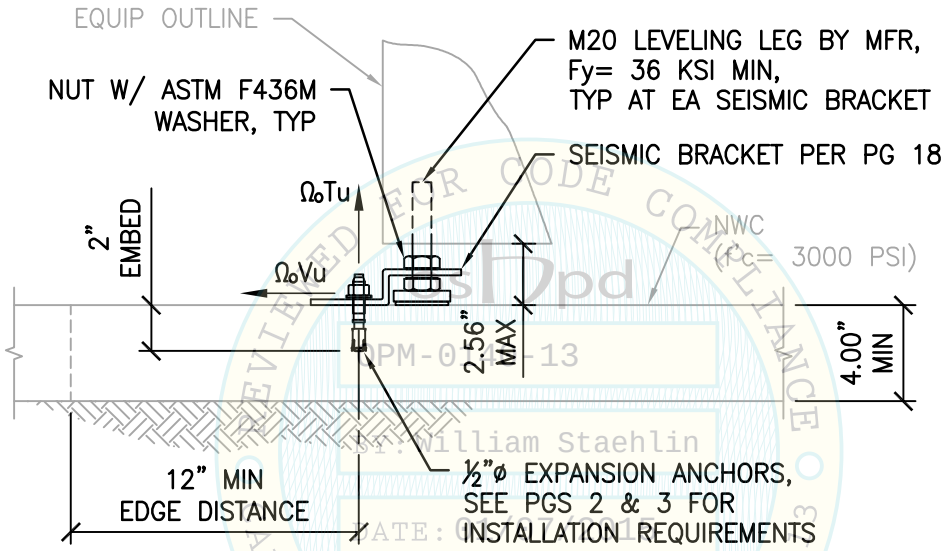
ROCHE DIAGNOSTICS CORPORATION
cobas® 8100 AUTOMATED WORK FLOW SERIES

		MAX LRFD FORCES AT EA ANCHOR	
		$\Omega_o T_u$	$\Omega_o V_u$
CASE 2	MAX TENSION	1222#	127#
	MAX SHEAR	618#	805#

OVERSTRENGTH FACTOR (Ω_o) INCLUDED.



SLAB ON GRADE (CASE 2)

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

SHEET TITLE: ATTACHMENT DETAIL
TO SLAB ON GRADE (CASE 2)

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	14085.03
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L:\Jobs14\14085 Roche - Four OPMs\Task 03 - cobas 8100 OPM-0140-13\STRU\S1_TASK 03.dwg Time:Jan06,2015-02:01pm Login:camachom Dimscale:1 LTScale:6