



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY
APPLICATION #: OPM-0139-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [] New [X] Renewal [] Update to Pre-CBC 2013 OPA Number: OPM-0139-13

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 8000 Modular Analyzer Series
Product Type: Blood Analyzers
Product Model Number: cobas C502, cobas C701, cobas C702, cobas E602, Sampler Unit, Ion Selective Electrode Unit, Module Sample Buffer Units, Module Sample Buffer Line Units, cobas E801
General Description: General Chemistry Tests

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: [Signature] Date: 06/08/2017
Title: Manager-Field Engineering Support Company Name: Roche Diagnostics Corporation





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

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): _____

OPM-0139-13

*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): _____

DATE: 08/16/2017

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: *William Staehlin* Date: 08-16-2017
Print Name: William Staehlin
Title: SSE
Condition of Approval (if applicable): _____

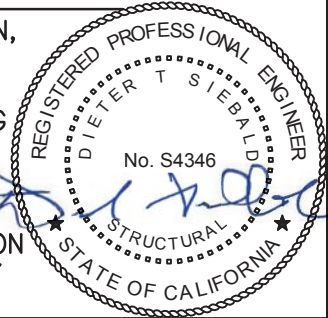




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- NOTES:**
1. THESE DRAWINGS ARE PREPARED FOR ROCHE DIAGNOSTICS CORPORATION, INDIANAPOLIS, INDIANA.
 2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT (OSHPD) PRE-APPROVAL PROGRAMS WEBSITE.
 3. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE UNIT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT UNITS ARE SUPPLIED BY ROCHE. THE SEISMIC BRACKETS, THRU-BOLTS & EXPANSION ANCHORS SHOWN ON PGS 21-27 SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.



SHEET TITLE: TABLE OF CONTENTS

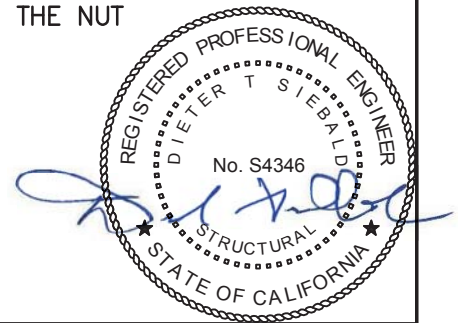
 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	<p>TEL (916) 920-2020 www.cyseng.com</p>	<p>Job No: 17035 Date: 08/15/2017 Page: 1 of 30</p>
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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD (SEOR) FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - A. THE ADEQUACY OF THE (N) OR (E) STRUCTURE TO RESIST THE FORCES AND WT SPECIFIED FOR EA EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE AND DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
 - 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 (N) OR (E) ANCHORS. THE SPACING SHOWN IN THE TEST LOADS TABLE ON PG 3 IS THE REQUIRED MIN SPACING OF THE 1/2" DIA AB'S. 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 W/ THE CBC 2016 AND W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIPMENT'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, AND THE MATERIAL AND GA OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
3. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING W/ ESR-1917 REISSUED MAY 2017.
 - A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR AND THE PARAMETERS GIVEN IN THE TABLE ON PG 3.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE W/ 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 W/ 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 EQUIP INSTALLATION. ALSO REFER TO CBC 1910A.5 "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 MIN 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 (1/2) TURN OF THE NUT.



SHEET TITLE: GENERAL NOTES

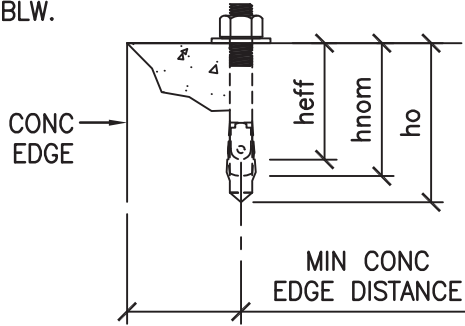
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GENERAL NOTES CONTINUED:

3D. TEST VALUES: APPLY TEST LOADS TO ANCHORS W/O REMOVING THE NUT IF POSSIBLE, SEE TABLE BLW.

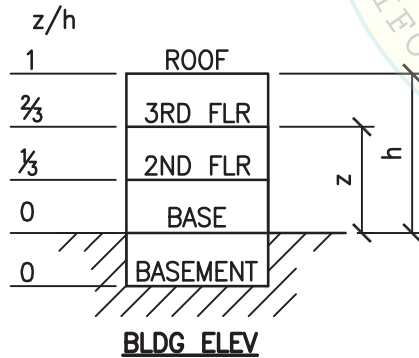


ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h _{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT-LBS)	
1/2	2 3/8	2	2 5/8	4	12	2.5	1555	40	CASE 2

4. BOLTS THROUGH CONCRETE ON MTL DECK:

- A. BOLTS SHALL BE TORQUED BY 3/4 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, UNO.
- 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 (THRU-BOLTS W/ STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS. DATE: 08/16/2017

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



CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h ≤ 1.0), THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 20 GA MTL DECK (f'c = 3000 PSI, MIN).

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).



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

SHEET TITLE: GENERAL NOTES (CONTINUED)

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SYSTEM OVERVIEW & DESIGN CRITERIA

- THE cobas 8000 MODULAR ANALYZER SERIES CONSISTS OF THE FOLLOWING MAJOR COMPONENTS:
 SAMPLER UNIT (SU) – SAMPLES ARE LOADED AND UNLOADED FROM THE SYSTEM HERE.
 ION SELECTIVE ELECTRODE UNIT (ISE) – OPTIONAL MODULE FOR DETERMINATION OF ELECTROLYTES.
 ANALYTICAL UNITS (AU) – UP TO FOUR ANALYTICAL UNITS CAN MAKE UP A SYSTEM, THEY ARE:
 cobas c701 – CLINICAL CHEMISTRY MODULE (HIGH THROUGHPUT)
 cobas c702 – CLINICAL CHEMISTRY MODULE (HIGH THROUGHPUT WITH REAGENT MANAGER (AUTOLOADER))
 cobas c502 – CLINICAL CHEMISTRY MODULE (MEDIUM THROUGHPUT)
 cobas e602 – IMMUNOASSAY MODULE
 cobas e801 – IMMUNOASSAY MODULE (HIGH THROUGHPUT) MAY BE USED INSTEAD OF e602
 ANALYTICAL UNIT CORE COMPONENTS – EA MODULE LISTED ABV HAS THE FOLLOWING CORE COMPONENTS:
 MODULE SAMPLE BUFFER (MSB) – SAMPLE BUFFER UNITS USED FOR SAMPLE RACK TRANSFER
 MODULE SAMPLE BUFFER LINE (MSBL) – SAMPLE TRANSFER LINES WHICH INCLUDE:
 TRANSFER LINE (TL) – RACK TRANSFER LINES LOCATED BEHIND EVERY MODULE THAT IS NOT THE LAST MODULE
 DRIVE LINE (DL) – RACK DRIVE LINE LOCATED BEHIND THE LAST MODULE IN A GIVEN CONFIGURATION
- SCHEMATIC OVERVIEW DRAWINGS FOLLOW THAT SHOW SINGLE, TWO, THREE, & FOUR MODULE SYSTEMS. ANALYTICAL UNIT MODEL COMBINATIONS & ORDER MAY VARY FROM THAT SHOWN, SEE PG 5 FOR ALL SYSTEM MODULE COMBINATIONS APPROVED UNDER THIS OPM.
- ATTACHMENT DESIGN IS PER 2016 CBC AT LRFD LEVEL FORCES.

FLR MOUNTED MECHANICAL EQUIP PER ASCE 7-10 TABLE 13.6-1.
 $a_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$ $\Omega_0 = 1.5$ (CONC ANCHORS)
 W_p AS NOTED ON COMPONENT DRAWINGS SHOWN ON PGS 10 TO 20 & 28 TO 30

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

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

THE MAX FORCES ON THE ATTACHMENT TO SUPPORTING STRUCTURE ARE DETERMINED BY EVALUATING THREE TYP GROUPS OF COMPONENTS. THE CENTER OF GRAVITY LOCATIONS & COMBINED OPERATING WTS USED IN THE EVALUATIONS ARE AS FOLLOWS:

GROUP #	PROPERTIES OF GROUPS ANALYZED FOR OPM				
	WT	X _{CG} (IN)	Y _{CG} (IN)	H _{CG} (IN)	COMPONENTS IN GROUP
1	419#	11.74	15.66	17.83	SU UNIT ONLY
2	805#	24.06	14.08	16.90	SU/ISE COMBINATION
3	1642#	16.95	14.25	21.54	MSB/MSBL/C702 MODULE *

* WORST CASE OF ALL MODULES – HEAVIEST UNIT WITH HIGHEST CENTER OF GRAVITY. REFER TO SYSTEM COMBINATION PLANS ON PGS 6 TO 9 FOR IDENTIFICATION OF GROUPS.



SHEET TITLE: SYSTEM OVERVIEW & DESIGN CRITERIA

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ROCHE DIAGNOSTICS CORPORATION
cobas® 8000 MODULAR ANALYZER SERIES



ABBREVIATIONS:

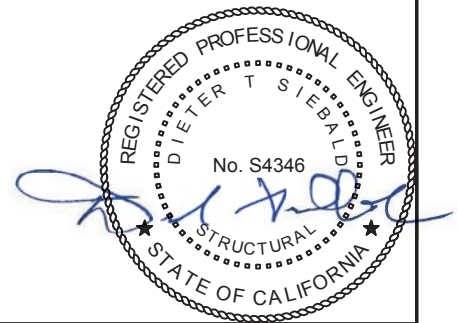
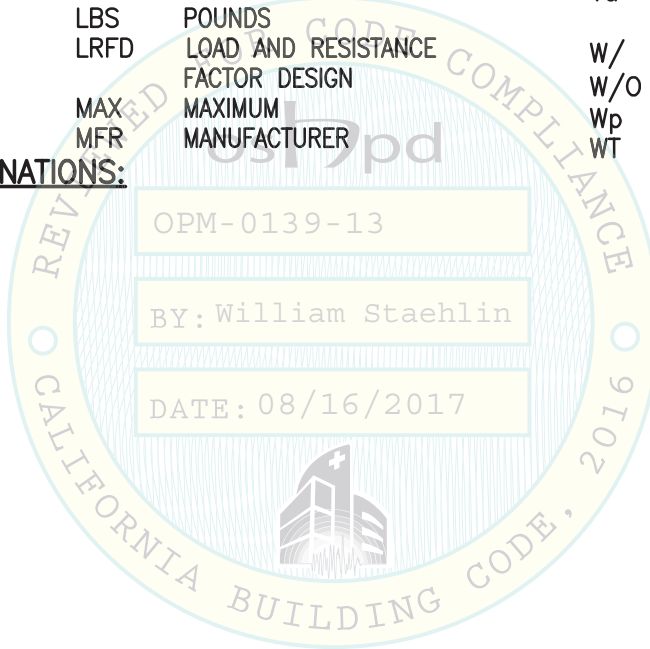
@	AT	f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	MIN	MINIMUM
AB	ANCHOR BOLT	FLR	FLOOR	MTL	METAL
ABV	ABOVE	FT (')	FOOT/FEET	(N)	NEW
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	F _p	HORIZONTAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS	NO. (#)	NUMBER OR POUNDS
BLDG	BUILDING	F _u	SPECIFIED MINIMUM ULTIMATE STRENGTH OF STEEL	NWC	NORMAL WEIGHT CONCRETE
BLW	BELOW	F _v	VERTICAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS	OPG	OPENING
BOTT	BOTTOM	F _y	SPECIFIED MINIMUM YIELD STRESS OF STEEL	PG	PAGE
CBC	CALIFORNIA BUILDING CODE	GA	GAUGE	PL	PLATE
CG	CENTER OF GRAVITY	IN (")	INCH	PSI	POUNDS PER SQUARE INCH
CL	CENTERLINE	KSI	KIPS PER SQUARE INCH	SLWC	SAND-LIGHTWEIGHT CONCRETE
CONC	CONCRETE	LBS	POUNDS	Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
COORD	COORDINATE	LRFD	LOAD AND RESISTANCE FACTOR DESIGN	THK	THICK/THICKNESS
DBL	DOUBLE	MAX	MAXIMUM	TYP	TYPICAL
DIA (φ)	DIAMETER	MFR	MANUFACTURER	T&B	TOP & BOTTOM
(E)	EXISTING CONDITION			UNO	UNLESS NOTED OTHERWISE
EA	EACH			Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
ELEV	ELEVATION			W/	WITH
EQUIP	EQUIPMENT			W/O	WITHOUT
				Wp	OPERATING WEIGHT
				WT	WEIGHT

SYSTEM MODULE COMBINATIONS:

OPM-0139-13

BY: William Staehlin

DATE: 08/16/2017



SHEET TITLE: ABBREVIATIONS & SYSTEM MODULE COMBINATIONS



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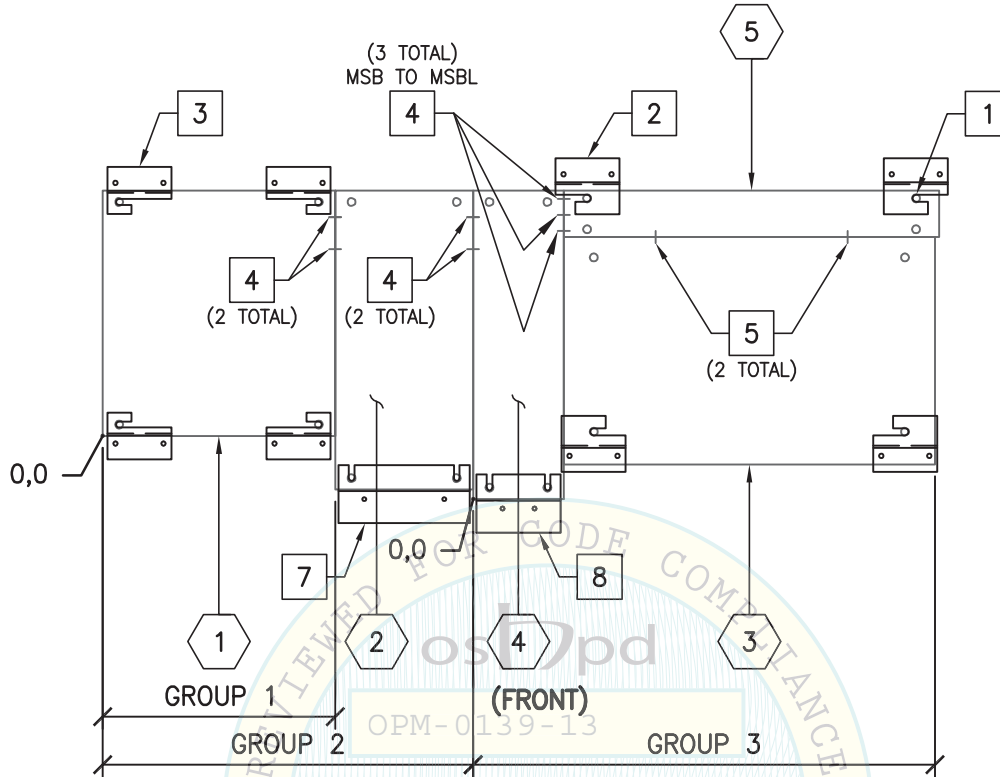
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ROCHE DIAGNOSTICS CORPORATION
cobas® 8000 MODULAR ANALYZER SERIES



BY: William Staehlin

DATE: 08/16/2017

COMPONENT

KEY NOTES

- 1 (SU) PER PG 10
- 2 (ISE 1 OR 2) PER PG 11 (OPTIONAL)
- 3 (AU) PER PGS 12 TO 15 & 28
- 4 (MSB) PER PGS 16 TO 18 & 29
- 5 (MSBL W/ TL OR DL) PER PGS 19, 20 & 30

- 1 LEVELING LEG, TYP
- 2 AU SEISMIC BRACKET PER PG 21, TYP
- 3 SU SEISMIC BRACKET PER PG 22, TYP
- 4 M8x16mm SUS304 BOLT BY MFR (REFER TO UNIT "PLAN & ELEVATIONS" FOR LOCATIONS
- 5 M8x20mm SUS304 BOLT BY MFR
- 6 M4x6mm CS SCREW BY MFR
- 7 ISE SEISMIC BRACKET PER PG 23
- 8 MSB SEISMIC BRACKET PER PG 24

NOTE:
SEE PG 4 FOR GROUP CG LOCATION & WT.

NOTE:
SEE PG 5 FOR ALL POSSIBLE MODULE COMBINATIONS APPROVED UNDER THIS OPM.



SHEET TITLE: SINGLE MODULE SYSTEM
COMBINATION PLAN



CYS STRUCTURAL ENGINEERS, INC.

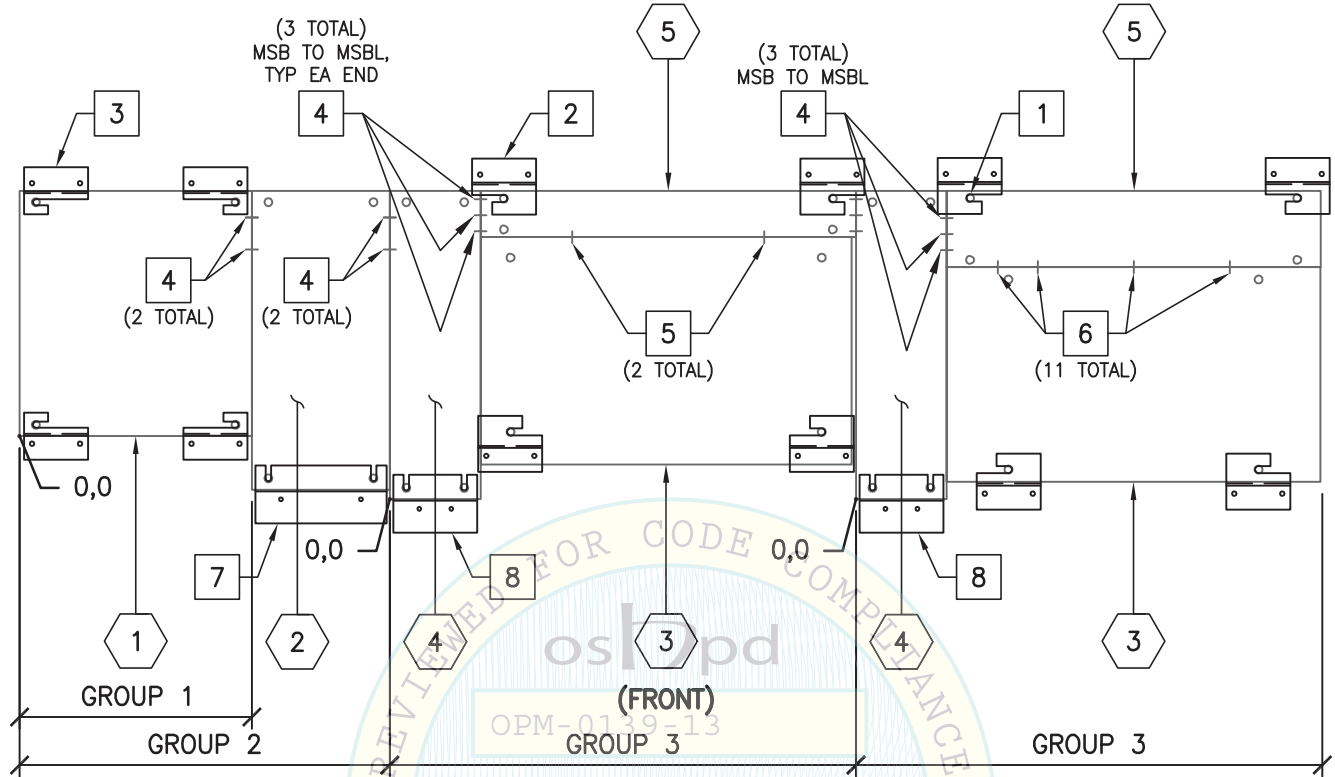
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ROCHE DIAGNOSTICS CORPORATION
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REVIEWED FOR CODE COMPLIANCE
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SHEET TITLE: TWO MODULE SYSTEM
COMBINATION PLAN



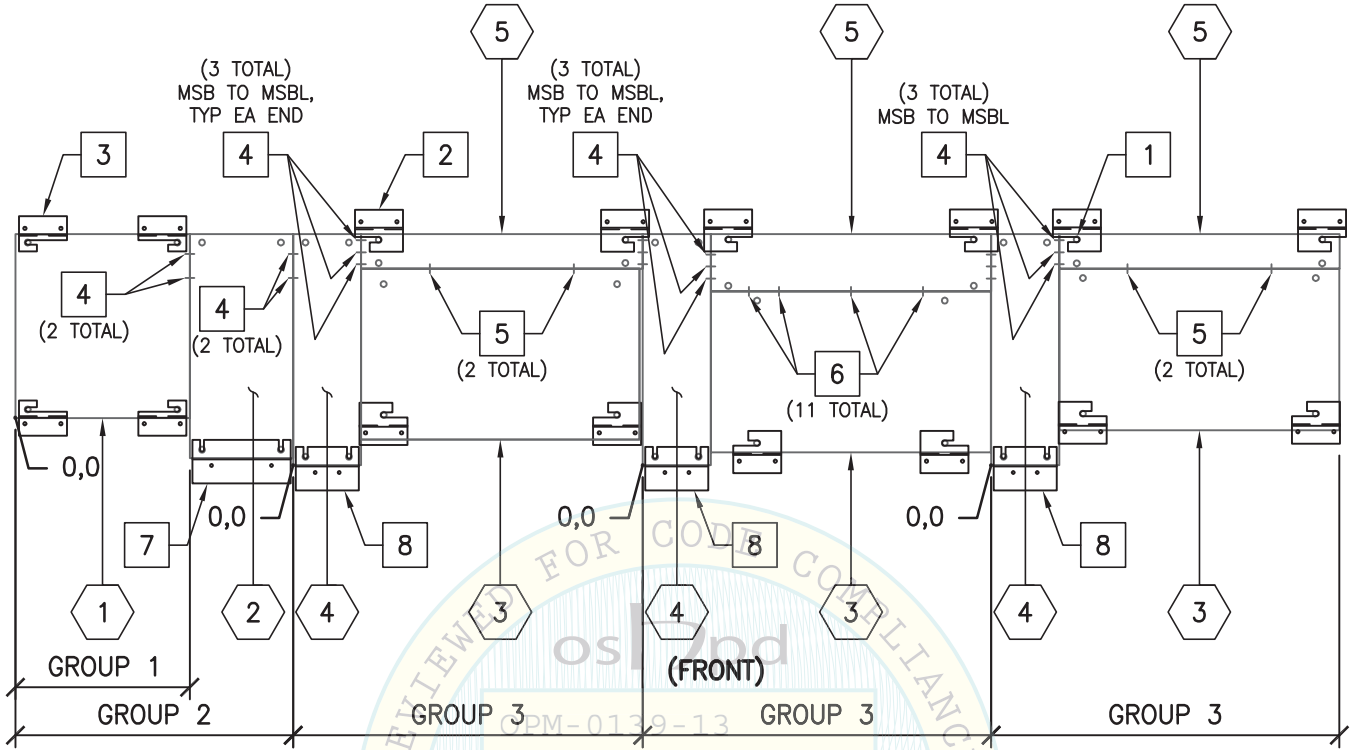
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SHEET TITLE: THREE MODULE SYSTEM
COMBINATION PLAN



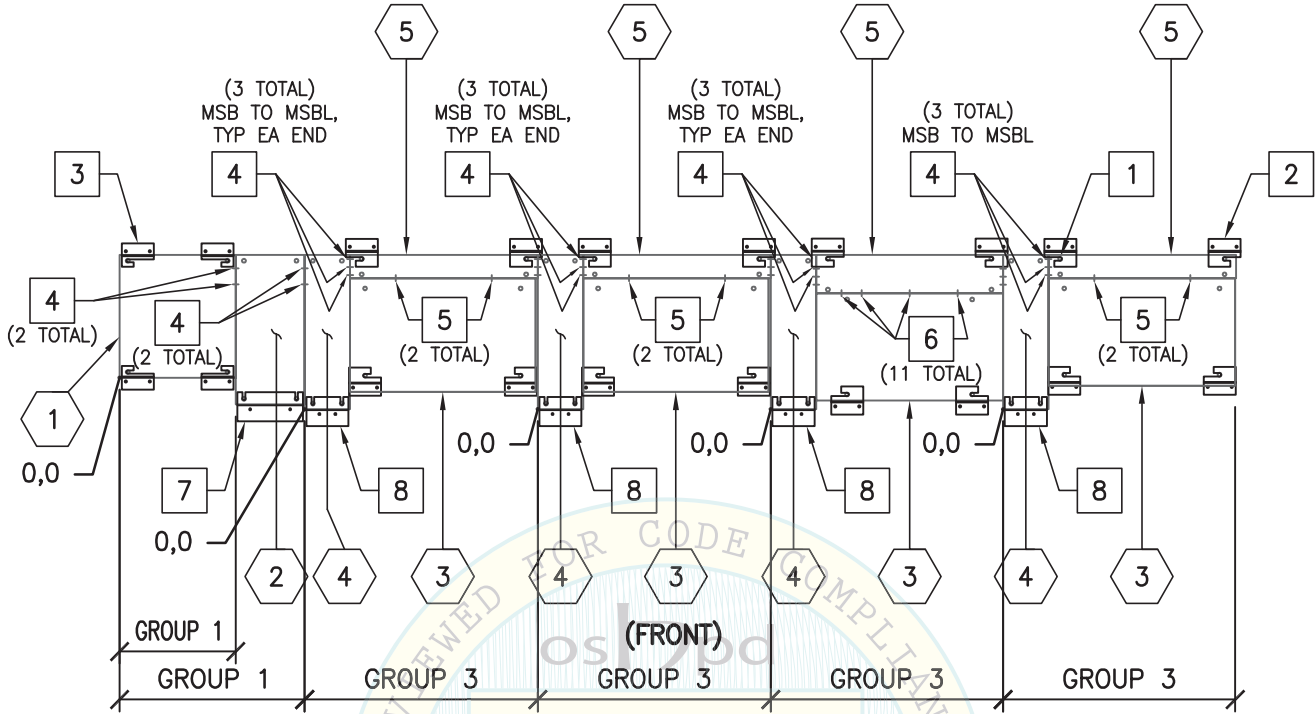
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NOTE:
SEE PG 5 FOR ALL POSSIBLE MODULE COMBINATIONS APPROVED UNDER THIS OPM.



SHEET TITLE: FOUR MODULE SYSTEM
COMBINATION PLAN



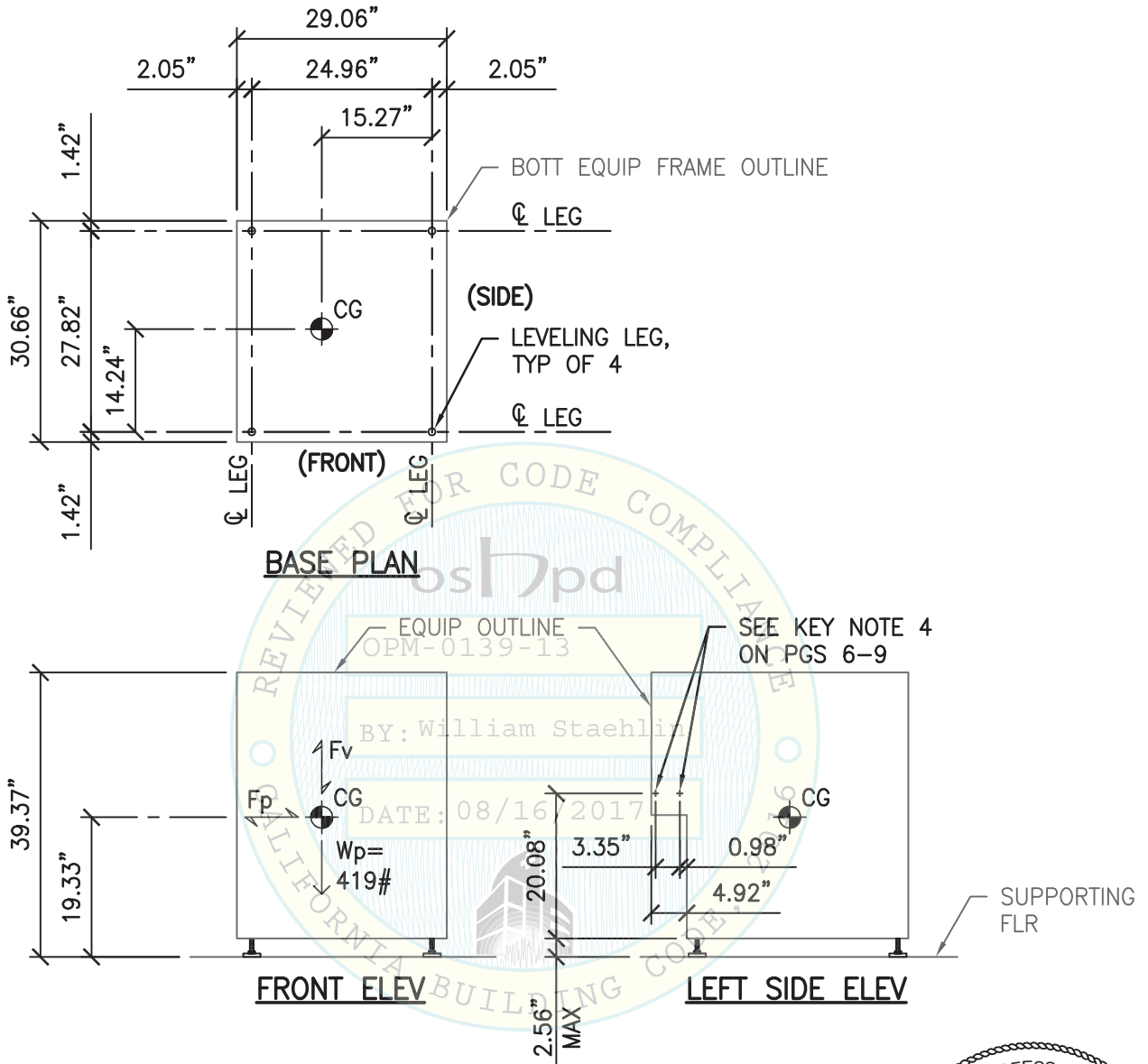
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No: 17035
Date: 08/15/2017
Page: 9 of 30

L:\Jobs\17\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\SI.dwg Time: Aug 15, 2017 - 05:41pm Login: cmachom DimScale: 1 LTScale: 6



- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: SAMPLER UNIT (SU)
PLAN & ELEVATIONS



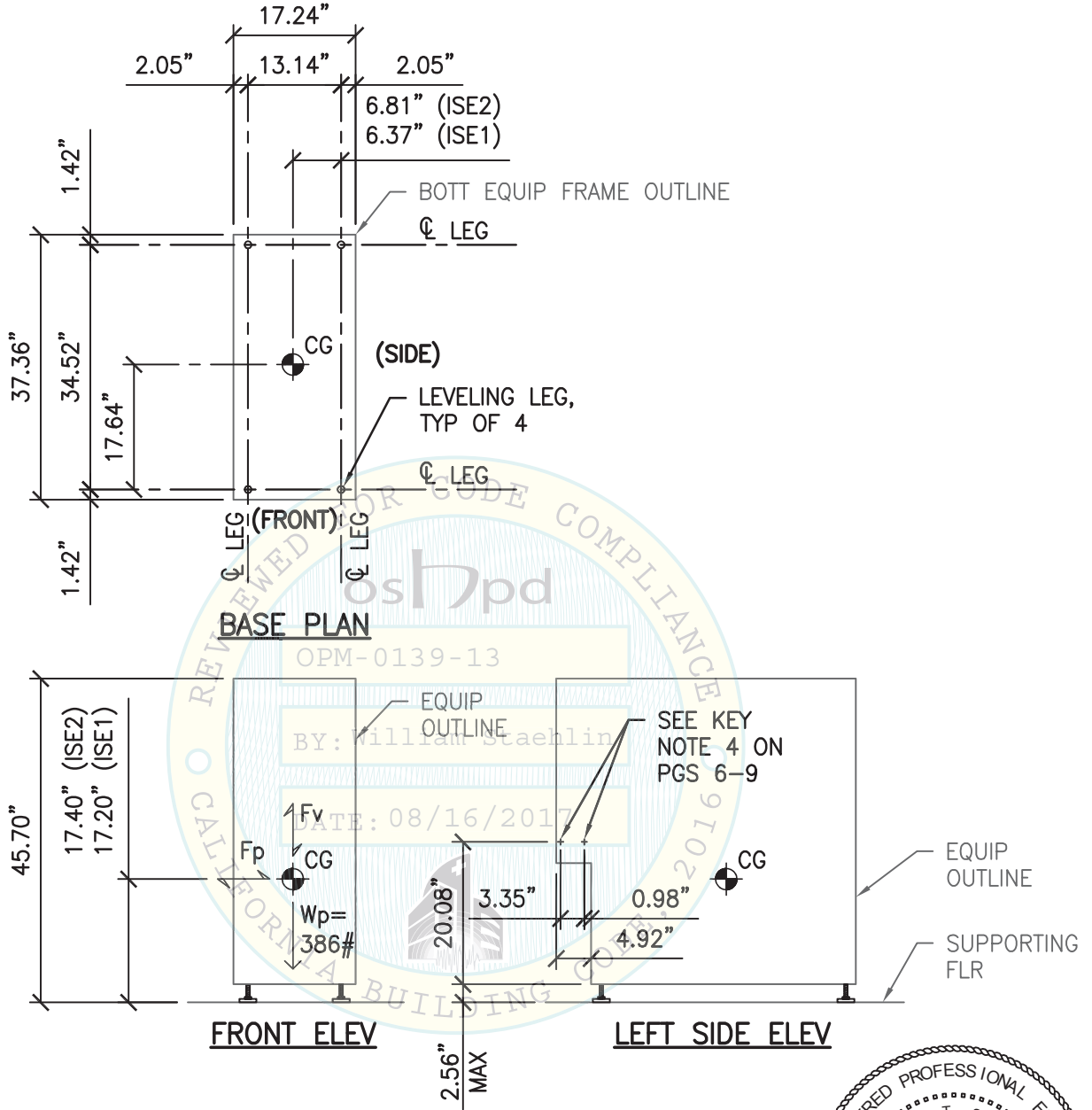
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

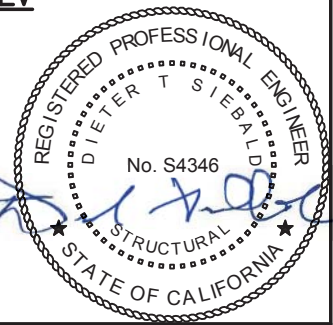
TEL (916) 920-2020
www.cyseng.com

Job No:	17035
Date:	08/15/2017
Page:	10 of 30

L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom DimScale:1 LTScale:6



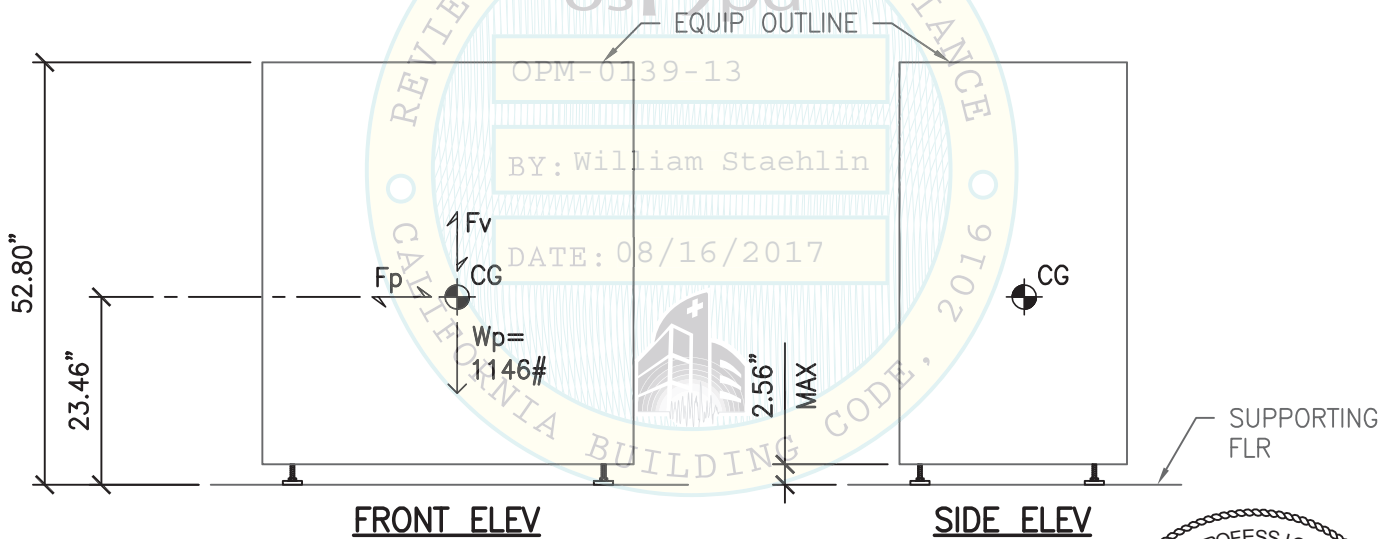
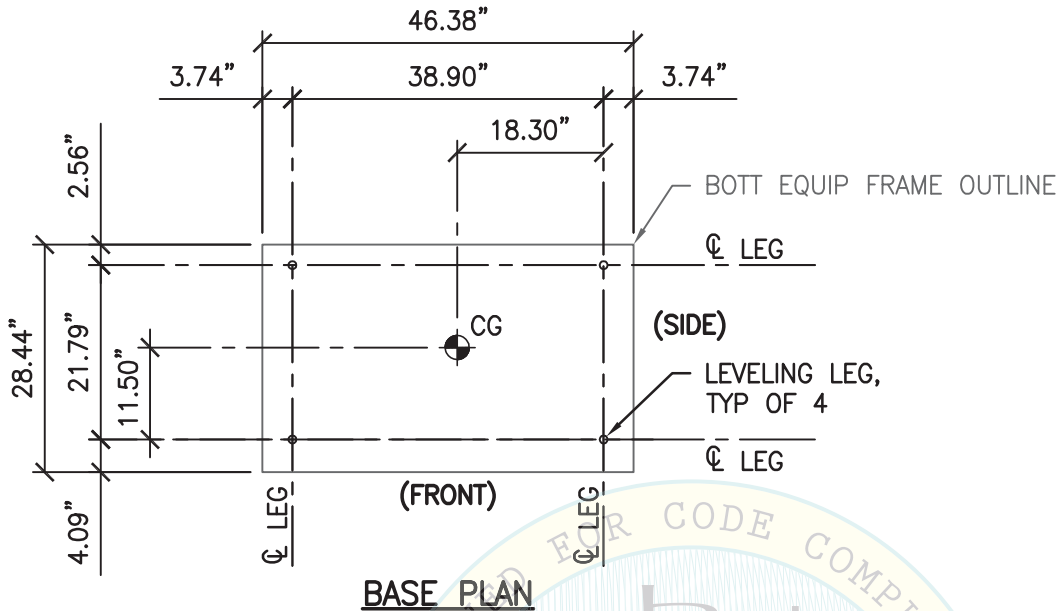
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: ION SELECTIVE ELECTRODE UNIT (ISE1 & ISE 2)
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 11 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom Dimscale:1 LTScale:6



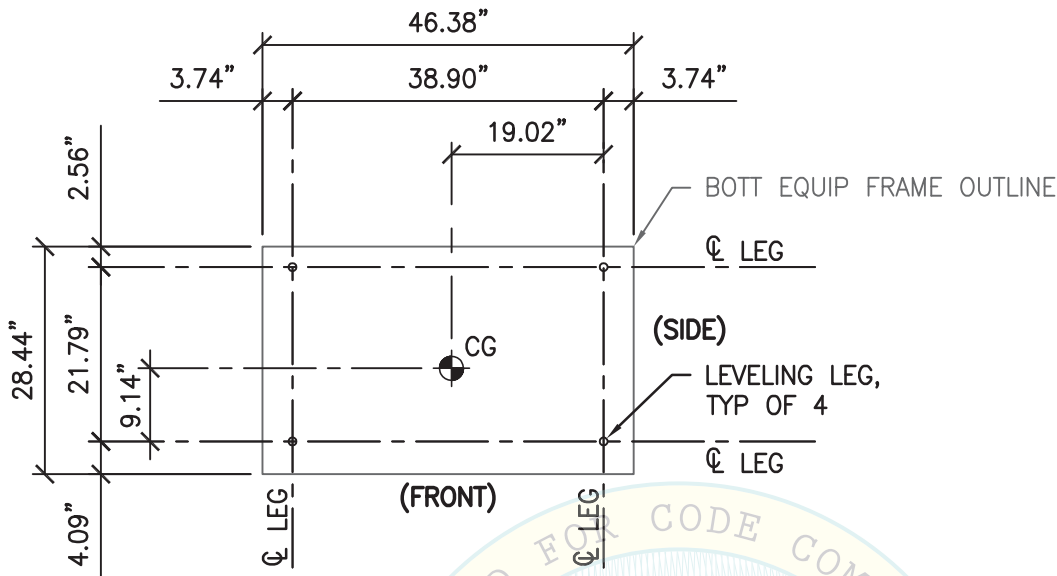
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



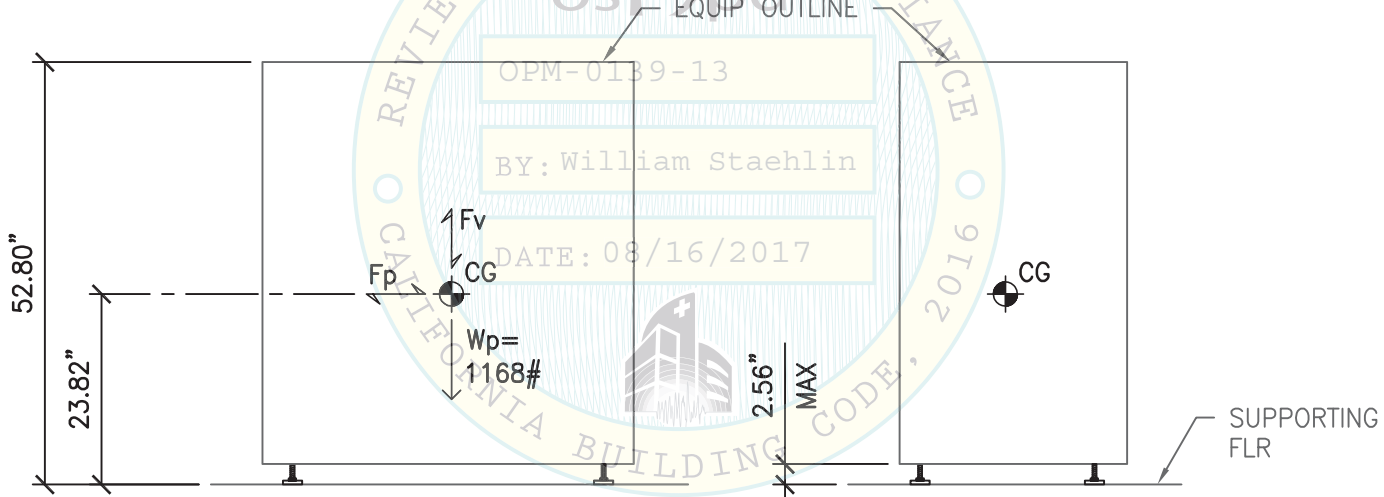
SHEET TITLE: ANALYTICAL UNIT (AU) cobas c701
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 12 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time: Aug 15, 2017 - 05:41pm Login: camachom DimScale: 1 LTScale: 6



BASE PLAN



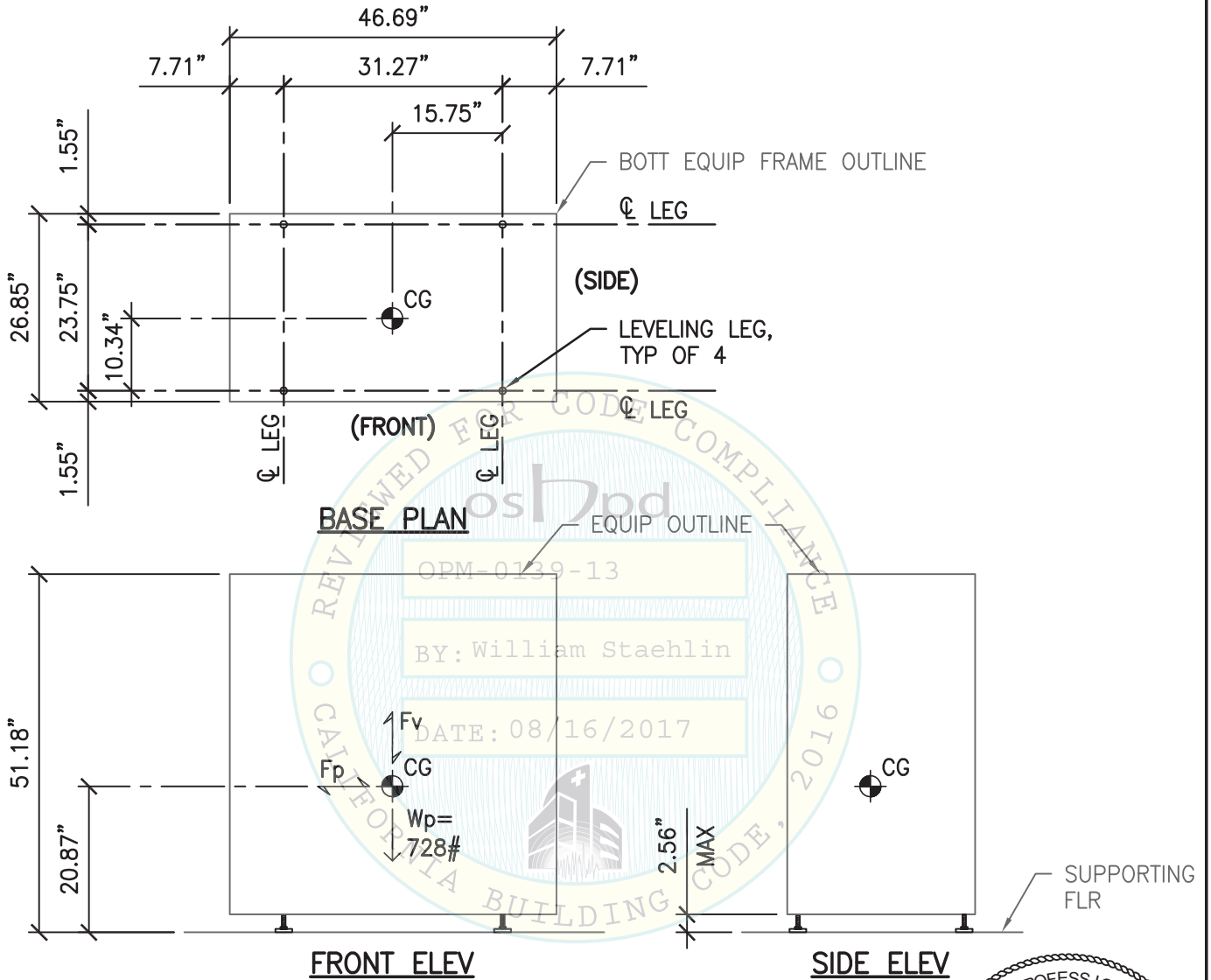
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: ANALYTICAL UNIT (AU) cobas c702
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 13 of 30
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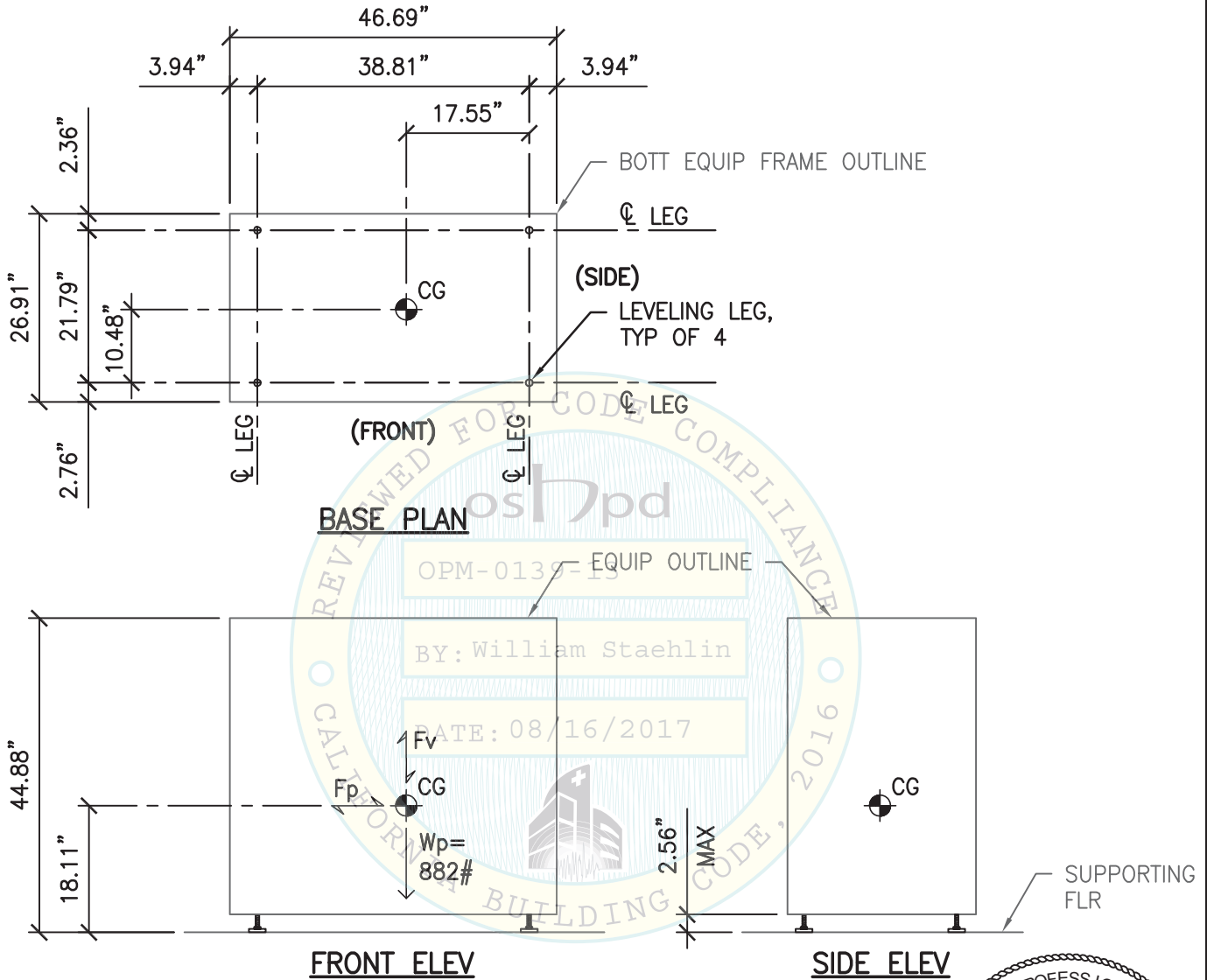
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: ANALYTICAL UNIT (AU) cobas c502
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 14 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time: Aug 15, 2017 - 05:41pm Login: camachom DimScale: 1 LTScale: 6



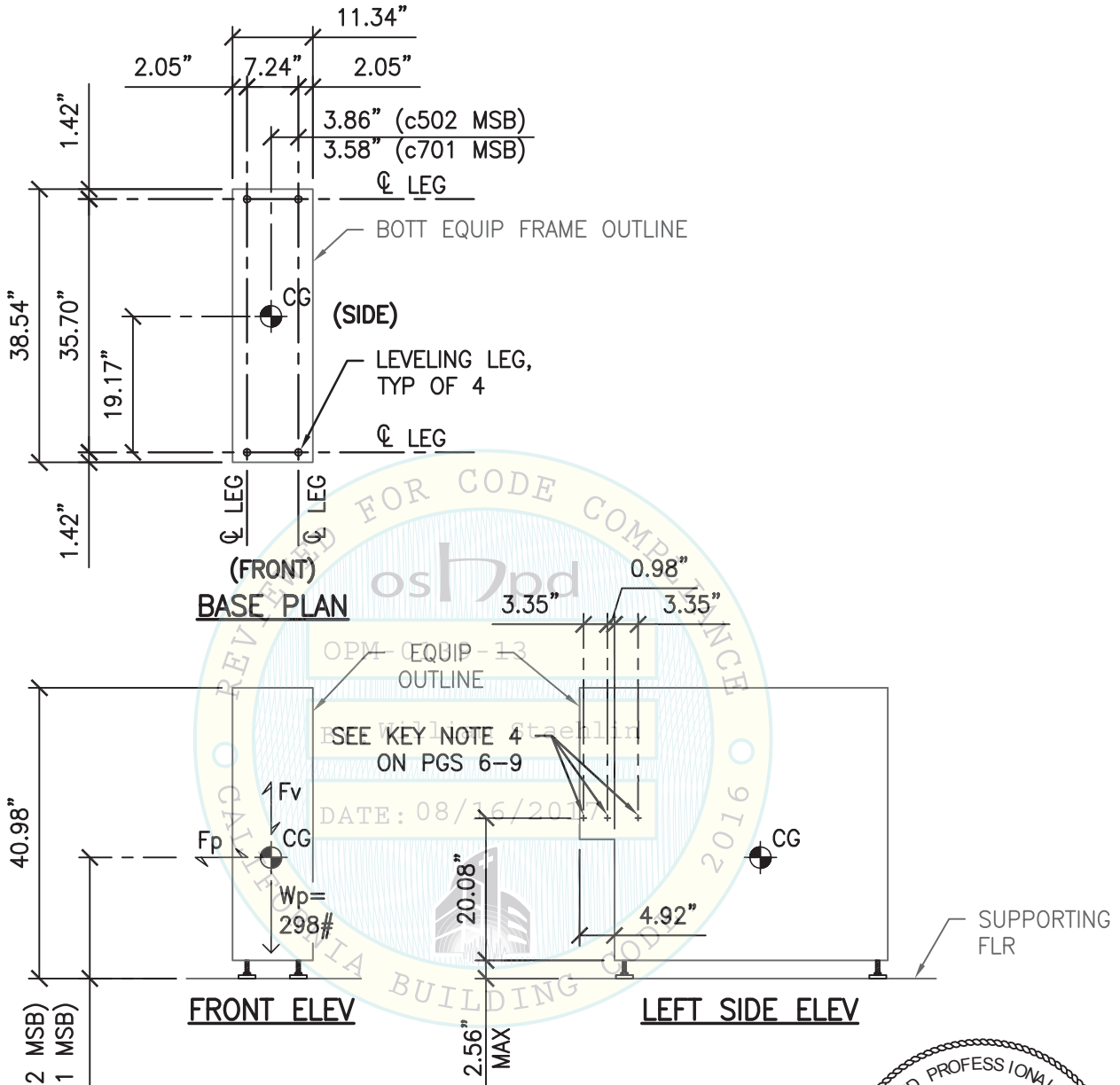
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: ANALYTICAL UNIT (AU) cobas e602
PLAN & ELEVATIONS

 <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 15 of 30
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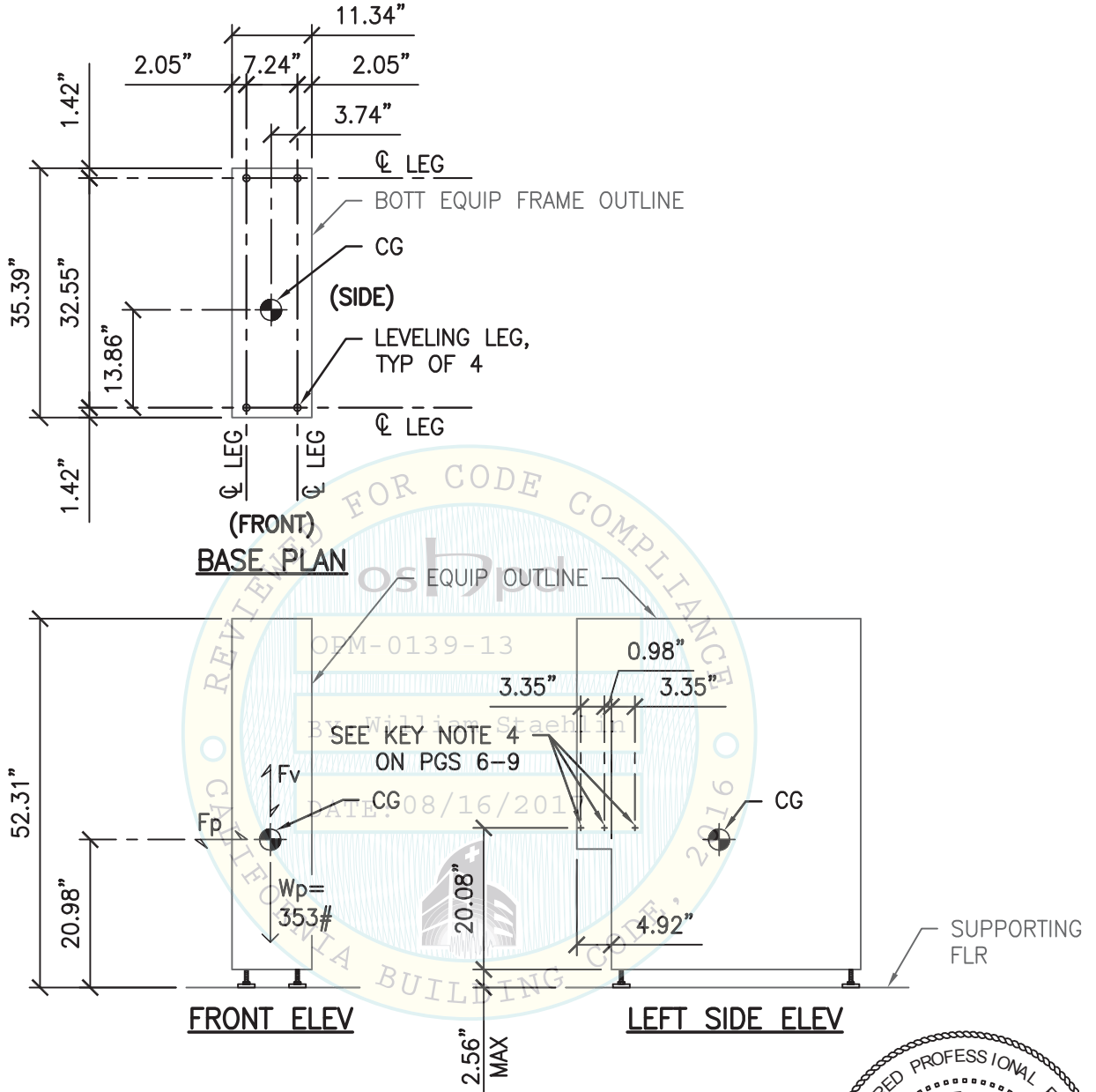
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



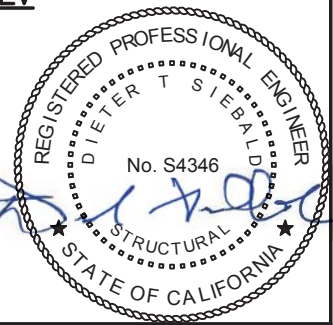
SHEET TITLE: MODULE SAMPLE BUFFER (MSB) FOR c502 & c701
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 16 of 30
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- 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 PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: MODULE SAMPLE BUFFER (MSB) FOR c702
PLAN & ELEVATIONS



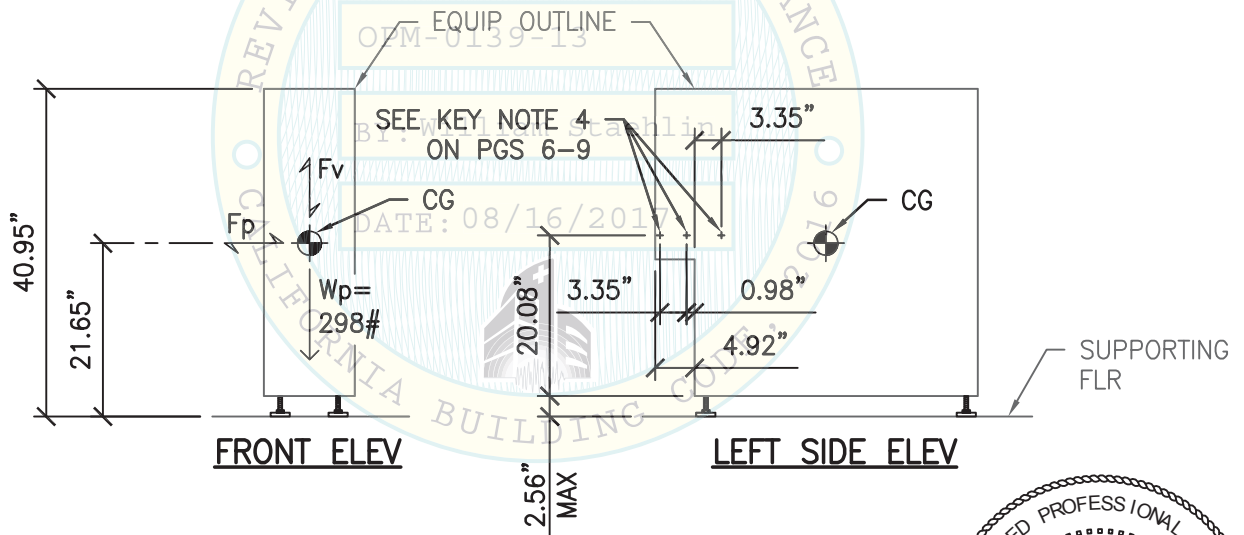
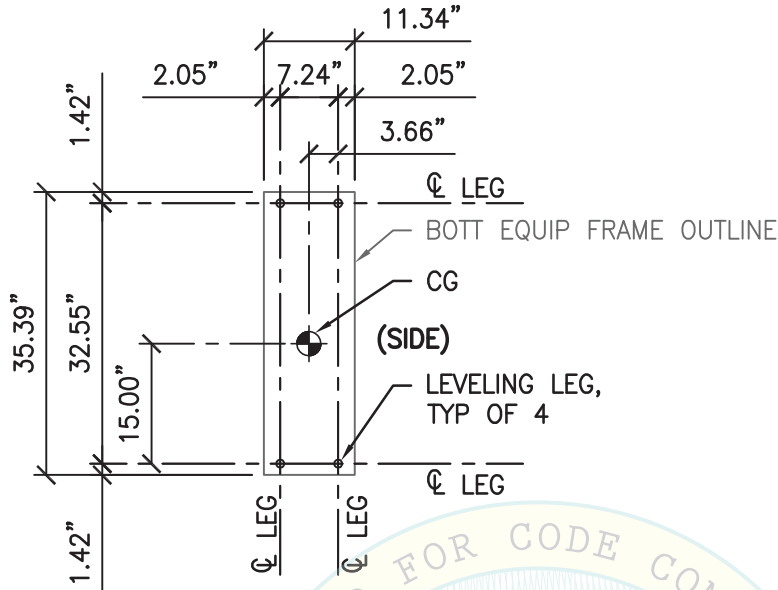
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No:	17035
Date:	08/15/2017
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom Dimscale:1 LTScale:6



- 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 PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: MODULE SAMPLE BUFFER (MSB) FOR e602
PLAN & ELEVATIONS



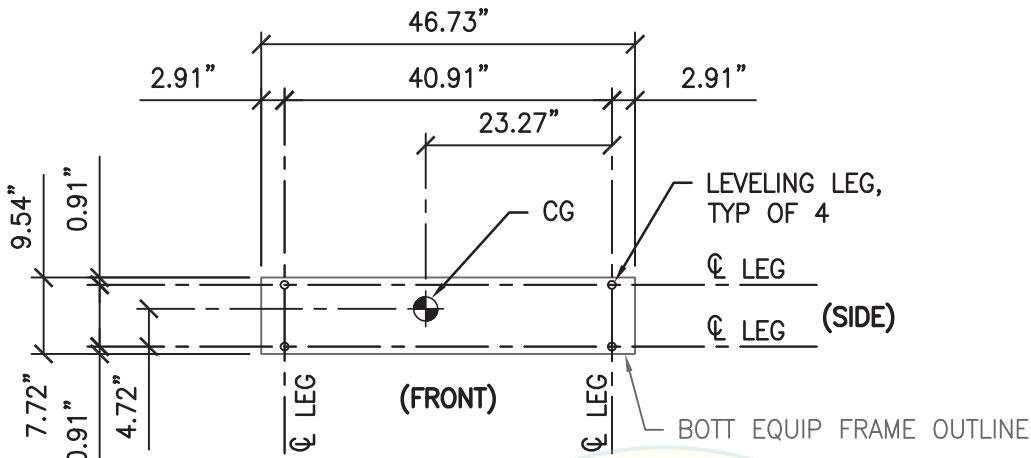
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

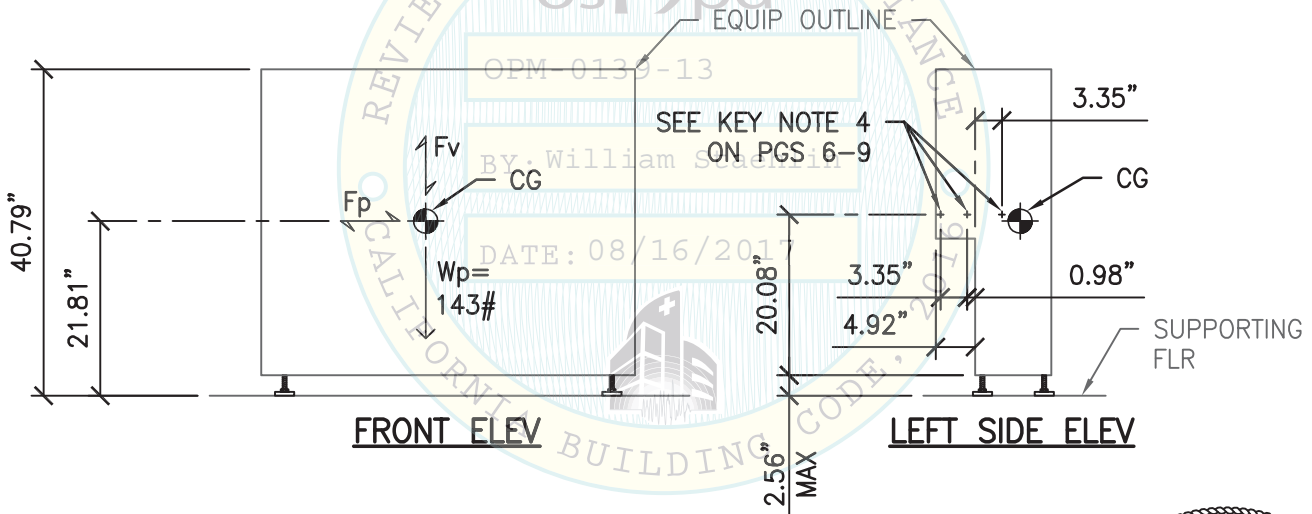
TEL (916) 920-2020
www.cyseng.com

Job No:	17035
Date:	08/15/2017
Page:	18 of 30

L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom Dimscale:1 LTScale:6



BASE PLAN



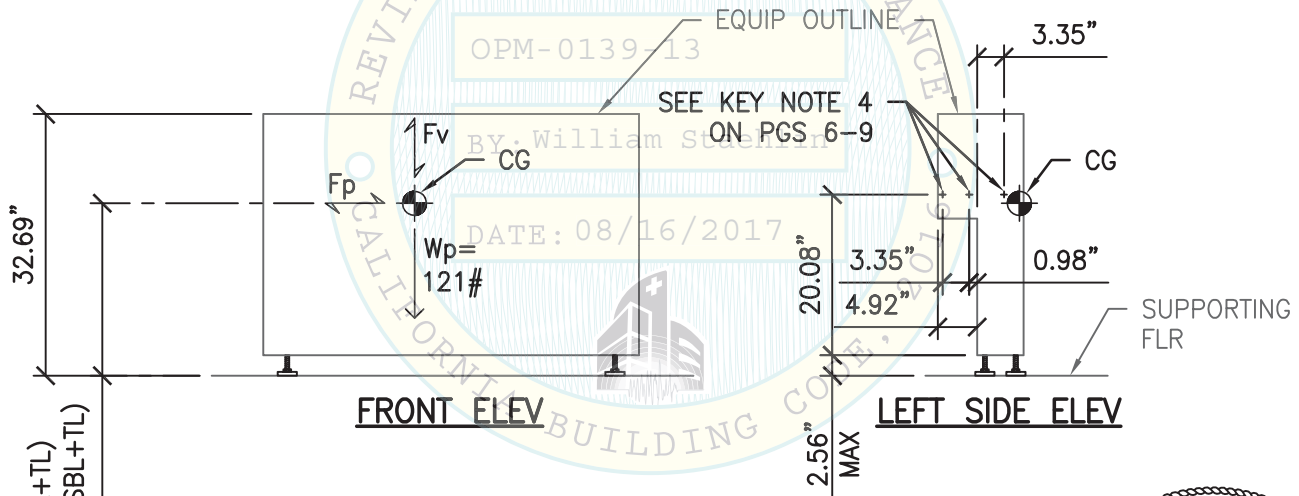
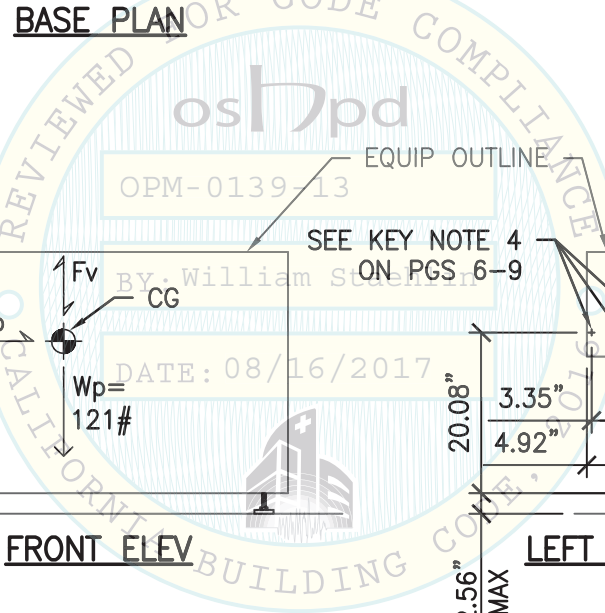
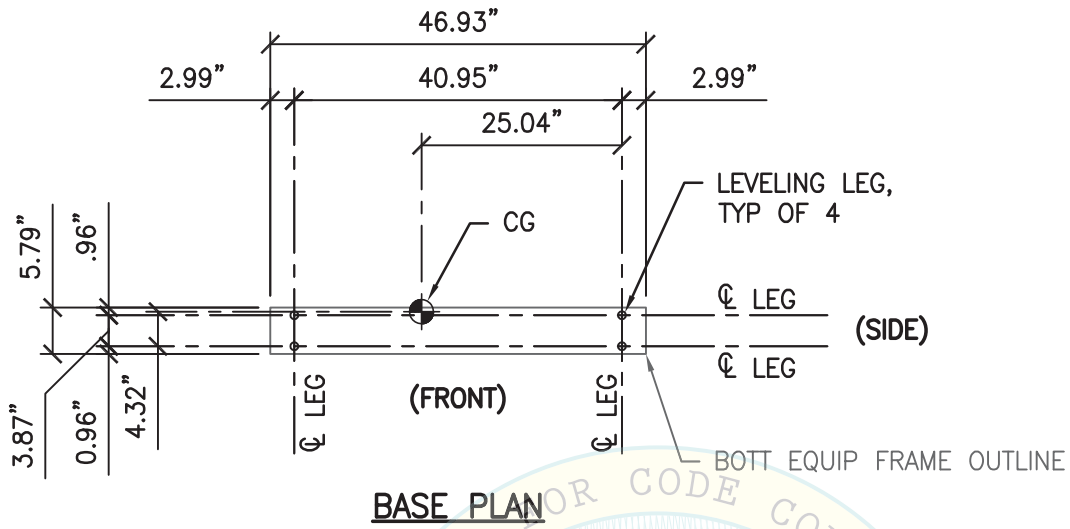
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: MODULE SAMPLE BUFFER LINE (MSBL W/ TL OR DL) FOR c502
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 19 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\1.dwg Time: Aug 15, 2017 - 05:41pm Login: camachom DimScale: 1 L1Scale: 6



- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



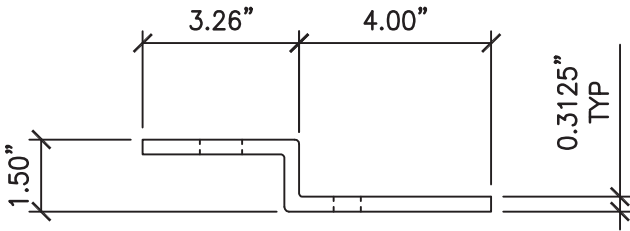
SHEET TITLE: MODULE SAMPLE BUFFER LINE (MSBL W/ TL OR DL) FOR c701, c702 & e602
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 20 of 30
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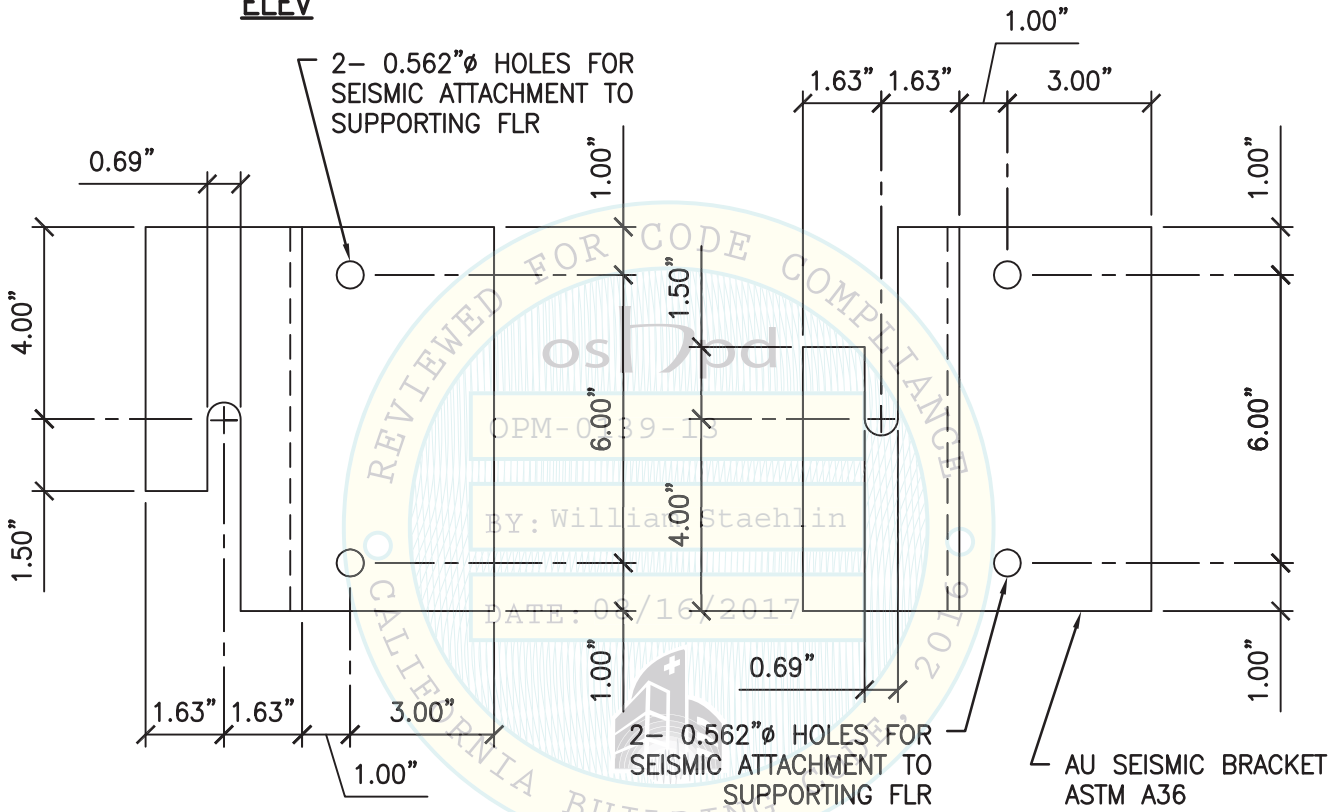
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- NOTES:**
1. FOR CASE 1 & CASE 2 ATTACHMENT TO FLR, SEE PGS 25 & 27.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



ELEV

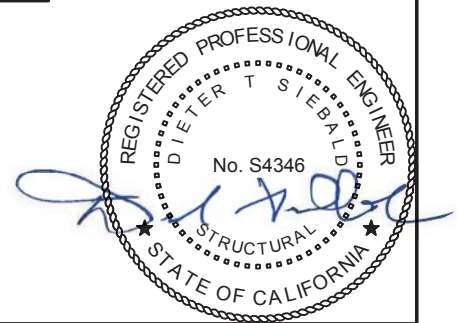
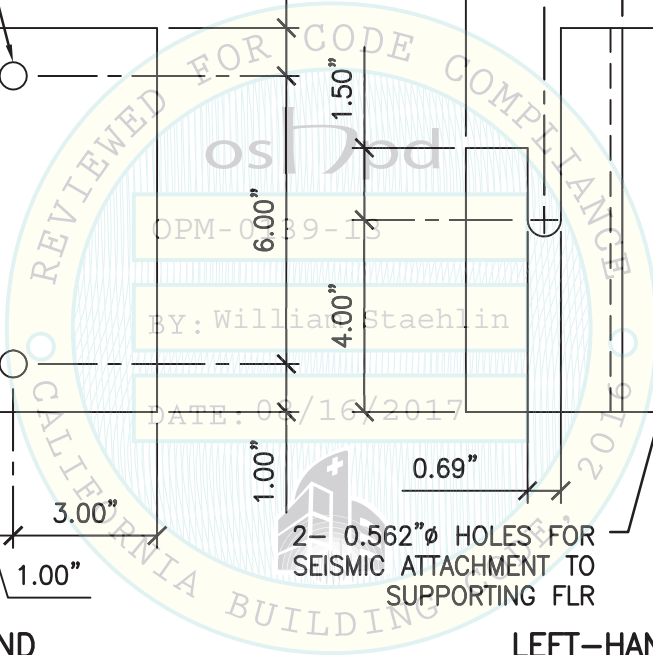


RIGHT-HAND

PLANS

LEFT-HAND

AU SEISMIC BRACKET
ASTM A36



SHEET TITLE: AU SEISMIC BRACKET DETAIL



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

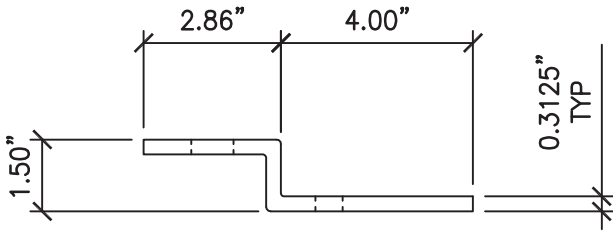
TEL (916) 920-2020
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Job No:	17035
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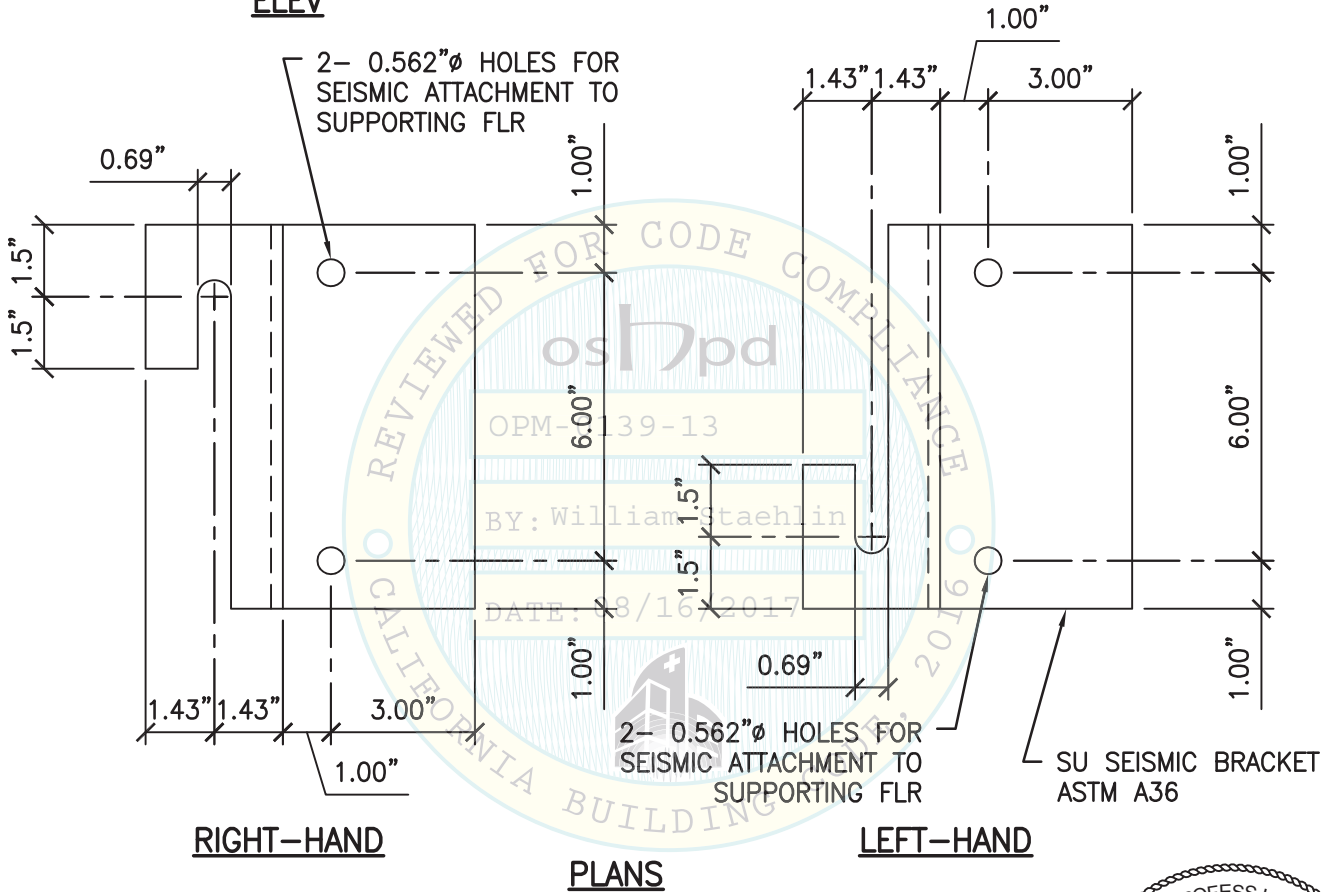
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- NOTES:**
1. FOR CASE 1 & CASE 2 ATTACHMENT TO FLR, SEE PGS 25 & 27.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



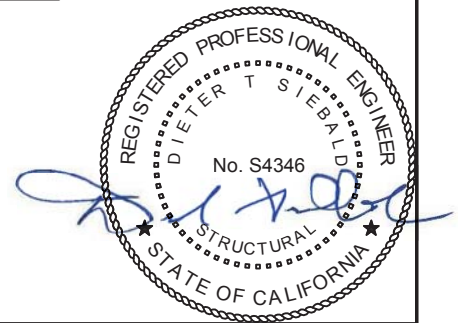
ELEV



RIGHT-HAND

PLANS

LEFT-HAND



SHEET TITLE: SU SEISMIC BRACKET DETAIL



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

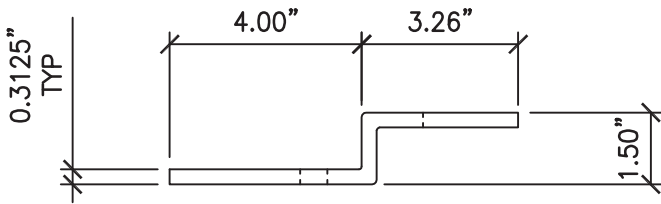
TEL (916) 920-2020
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Job No:	17035
Date:	08/15/2017
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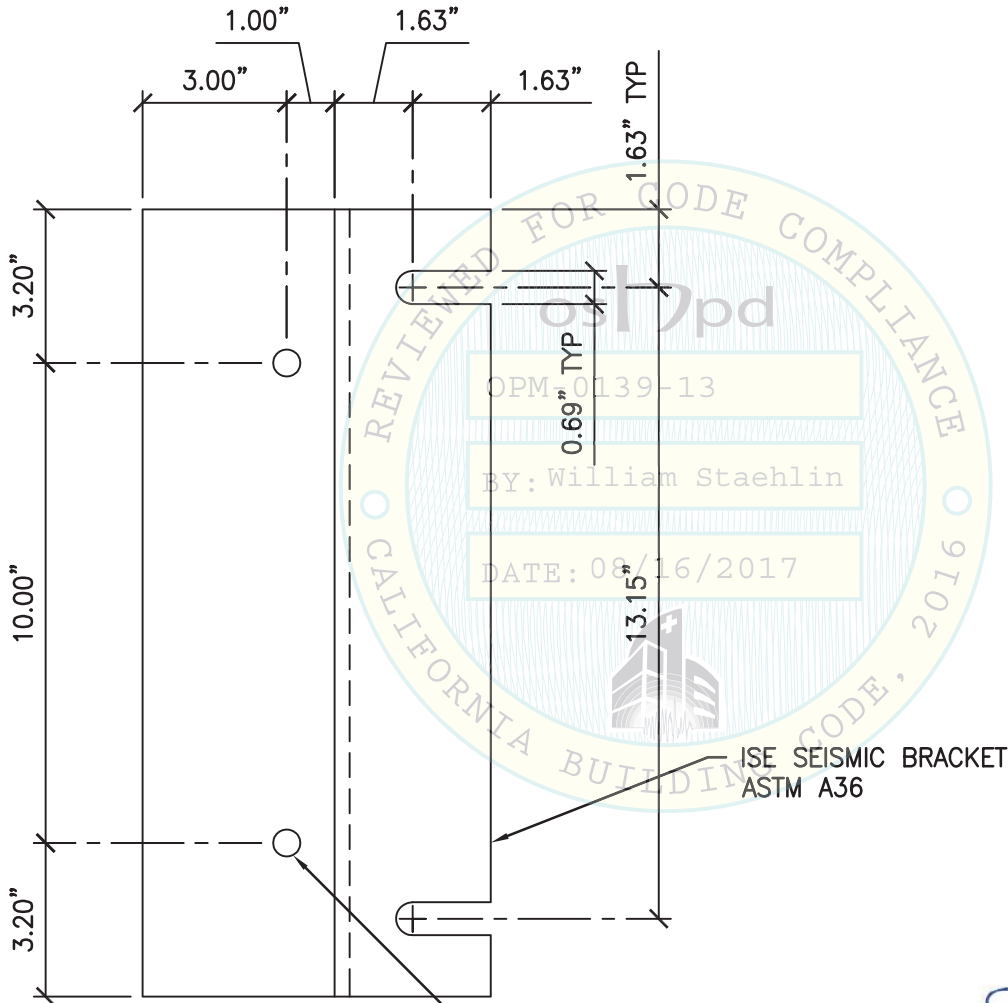
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- NOTES:**
1. FOR CASE 1 & CASE 2 ATTACHMENT TO FLR, SEE PGS 25 & 27.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



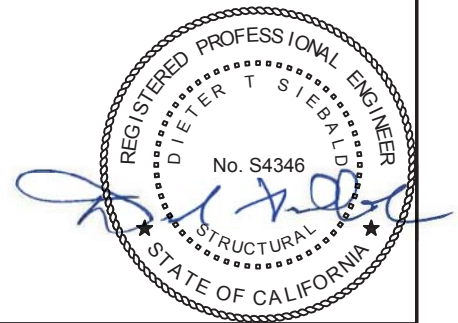
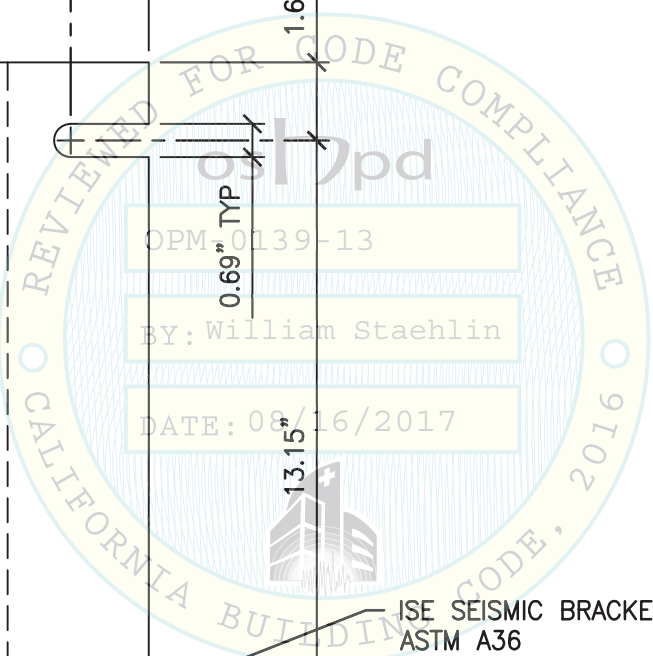
ELEV



PLAN

ISE SEISMIC BRACKET
ASTM A36

2- 0.562"Ø HOLES FOR SEISMIC ATTACHMENT TO SUPPORTING FLR



SHEET TITLE: ISE SEISMIC BRACKET DETAIL



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

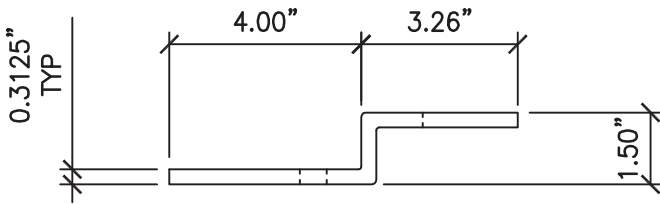
TEL (916) 920-2020
www.cyseng.com

Job No:	17035
Date:	08/15/2017
Page:	23 of 30

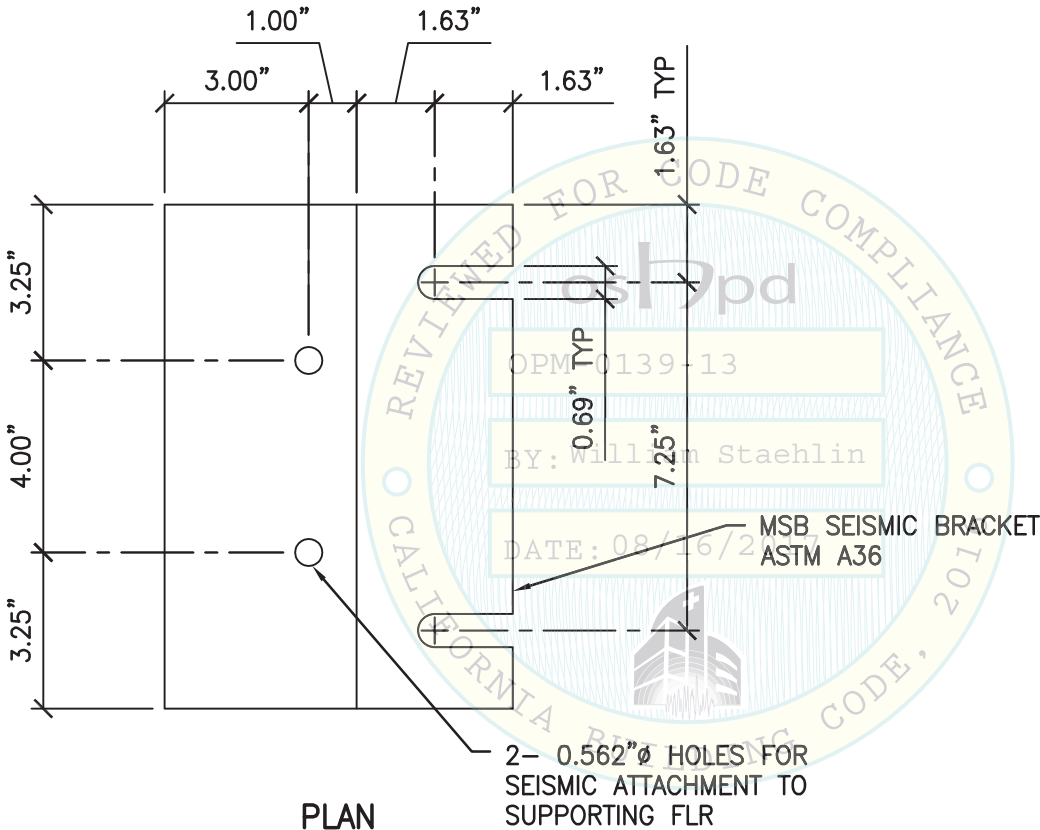
L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom DimScale:1 LTScale:6



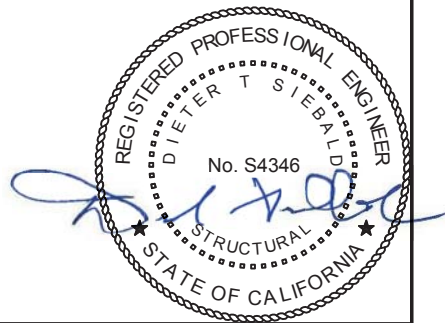
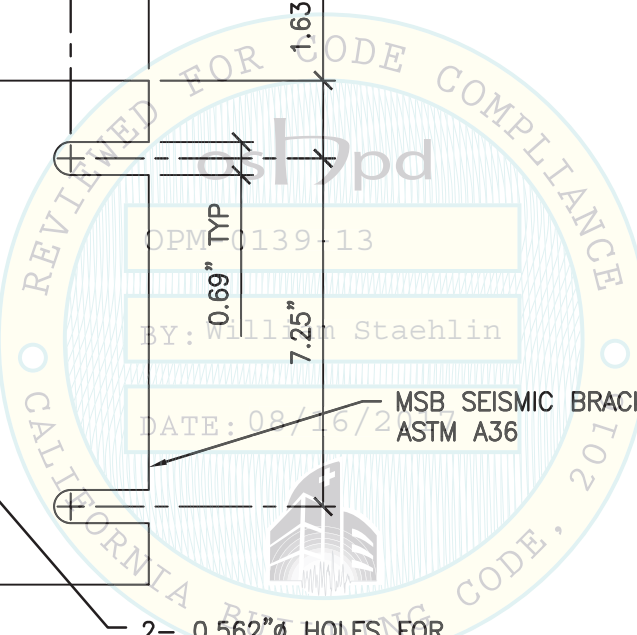
- NOTES:**
1. FOR CASE 1 & CASE 2 ATTACHMENT TO FLR, SEE PGS 25 & 27.
 2. BRACKET & SLOT DIRECTIONS SHALL BE FOLLOWED AS SHOWN ON SYSTEM COMBINATION PLANS.



ELEV



PLAN



SHEET TITLE: MSB SEISMIC BRACKET DETAIL



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

TEL (916) 920-2020
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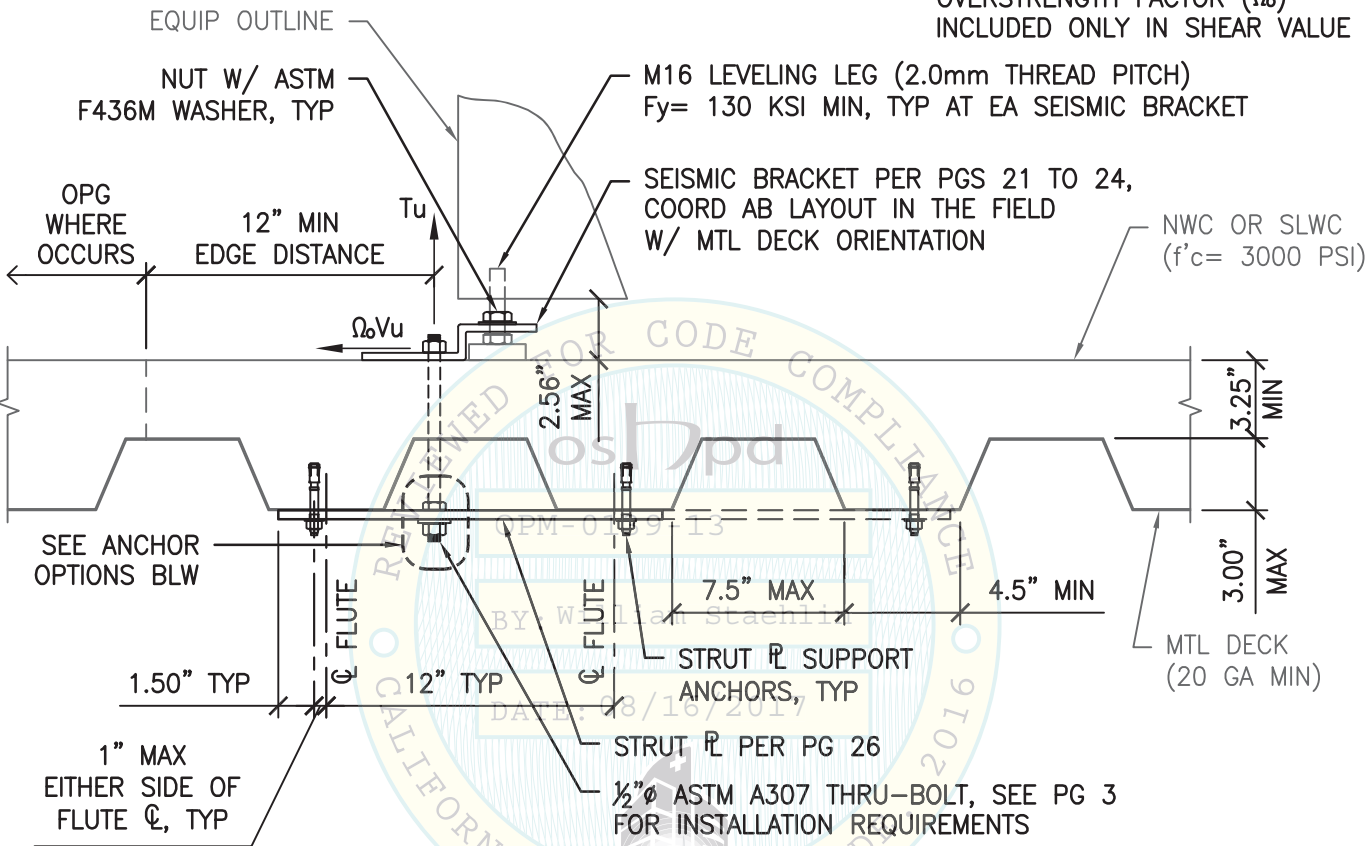
Job No:	17035
Date:	08/15/2017
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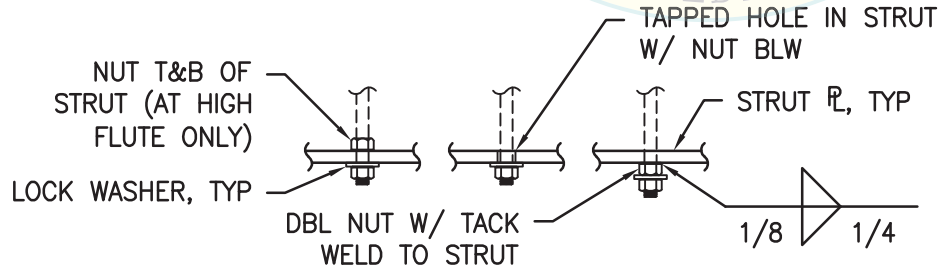


MAX LRFD FORCES AT EA ANCHOR	
T_u	$\Omega_0 V_u$
CASE 1	2035# 2892#

OVERSTRENGTH FACTOR (Ω_0) INCLUDED ONLY IN SHEAR VALUE



SUSPENDED FLOOR (CASE 1)



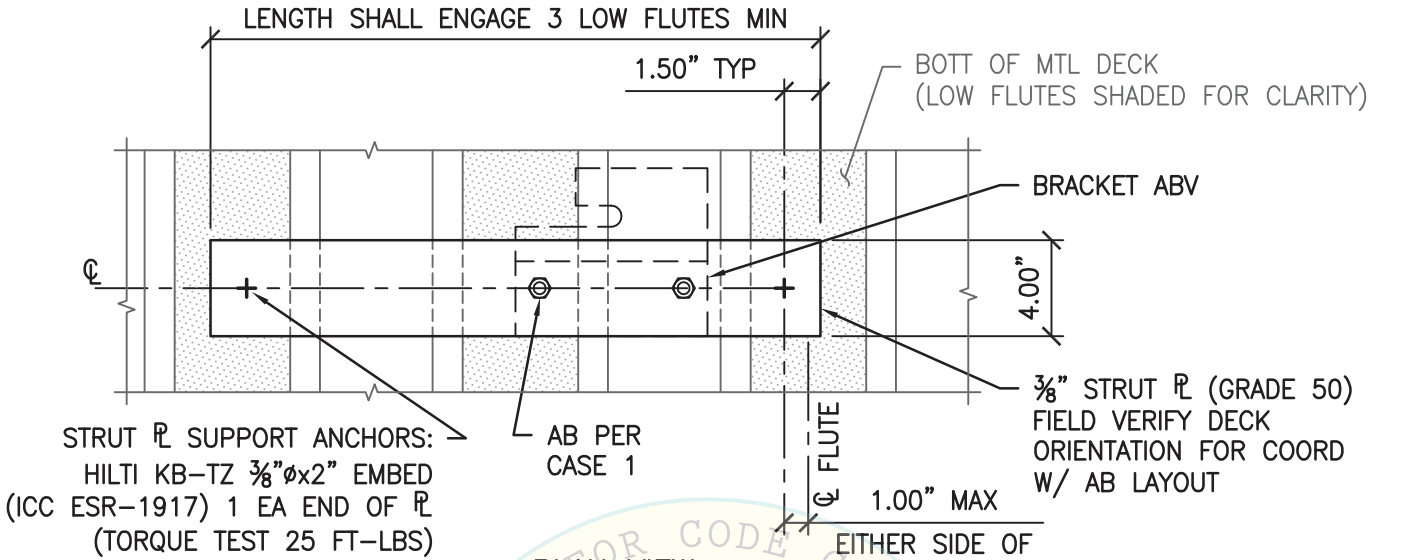
ANCHOR OPTIONS



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

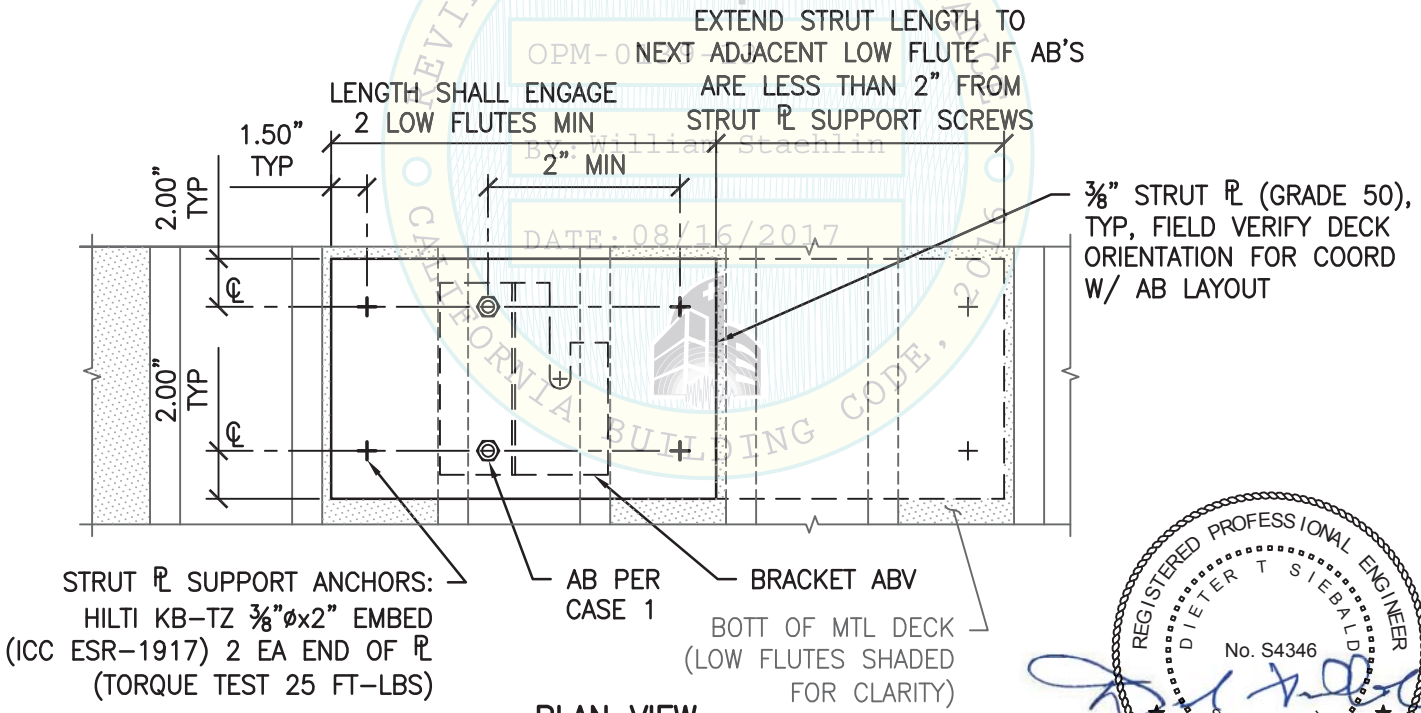
<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 25 of 30
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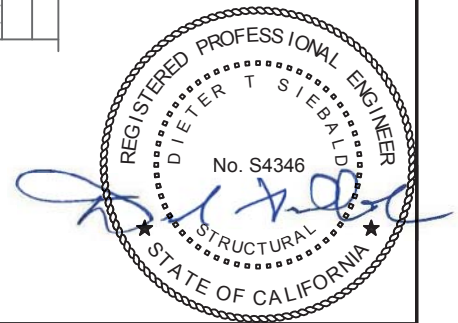
PLAN VIEW

BRACKET PERPENDICULAR TO FLUTES



PLAN VIEW

BRACKET PARALLEL TO FLUTES



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:	17035
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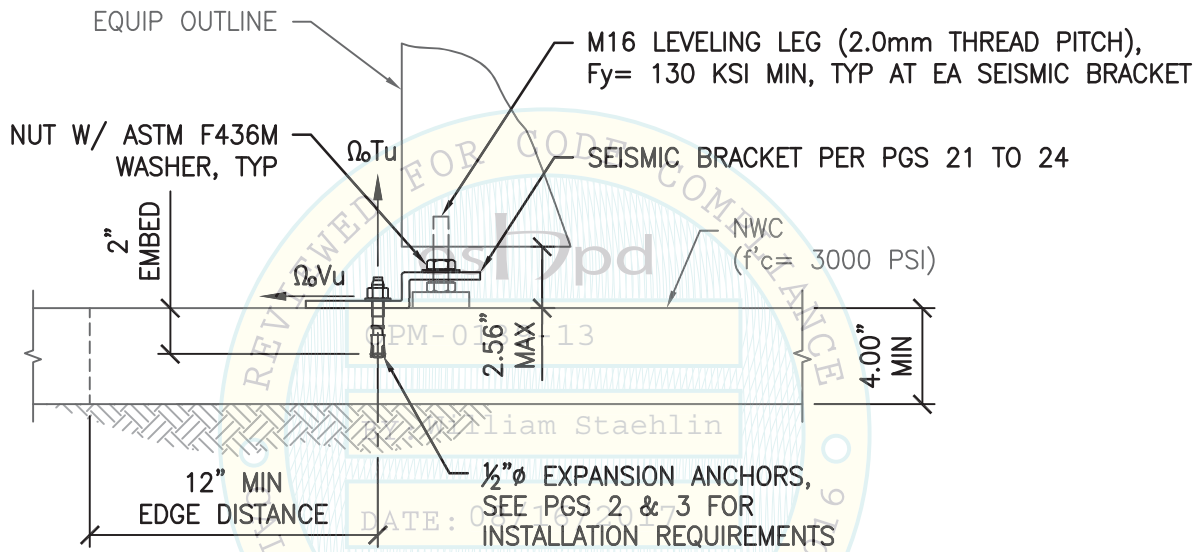
L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time: Aug 15, 2017 - 05:41pm Login: camachom DimScale: 1 LTScale: 6



MAX LRFD FORCES
AT EA ANCHOR

	$\Omega_o T_u$	$\Omega_o V_u$
CASE 2A	1194#	585#
CASE 2B	774#	1553#

OVERSTRENGTH FACTOR (Ω_o) INCLUDED.



SLAB ON GRADE (CASE 2)

EQUIPM FRAME MATERIAL:

SUS430, GRADE 430SS, ASTM A240:
2.0mm THK (14 GA)
Fy= 45 KSI MIN; Fu= 70 KSI MIN

OR

JFE-CC-EZ-JN 20/20, CHROMATE FREE COATED STEEL:
2.5mm THK (13 GA)
Fy= 18.1 KSI MIN; Fu= 39.1 KSI MIN



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



CYS STRUCTURAL ENGINEERS, INC.

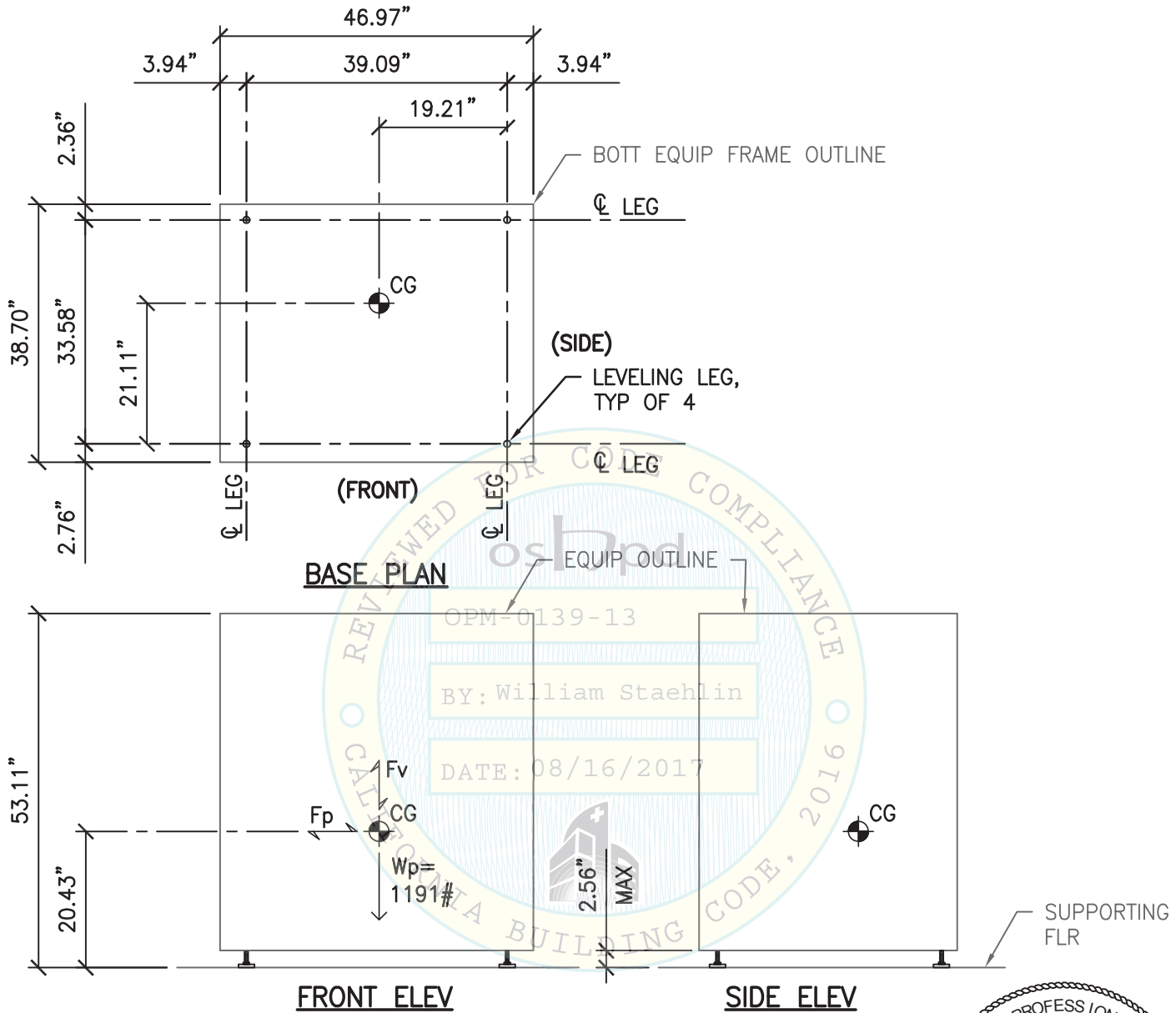
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

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

Job No: 17035
Date: 08/15/2017
Page: 27 of 30

L:\Jobs\17\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017 -05:41pm Login:cmachom DimScale:1 LTScale:6

ROCHE DIAGNOSTICS CORPORATION
cobas® 8000 MODULAR ANALYZER SERIES



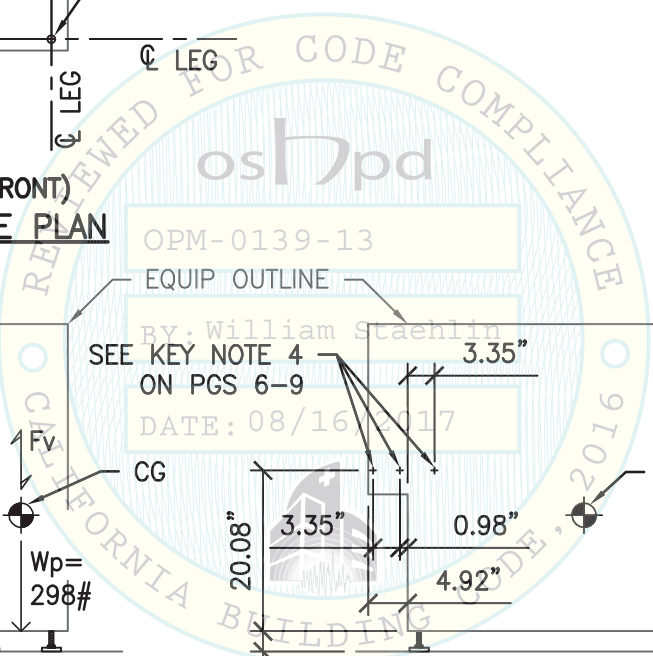
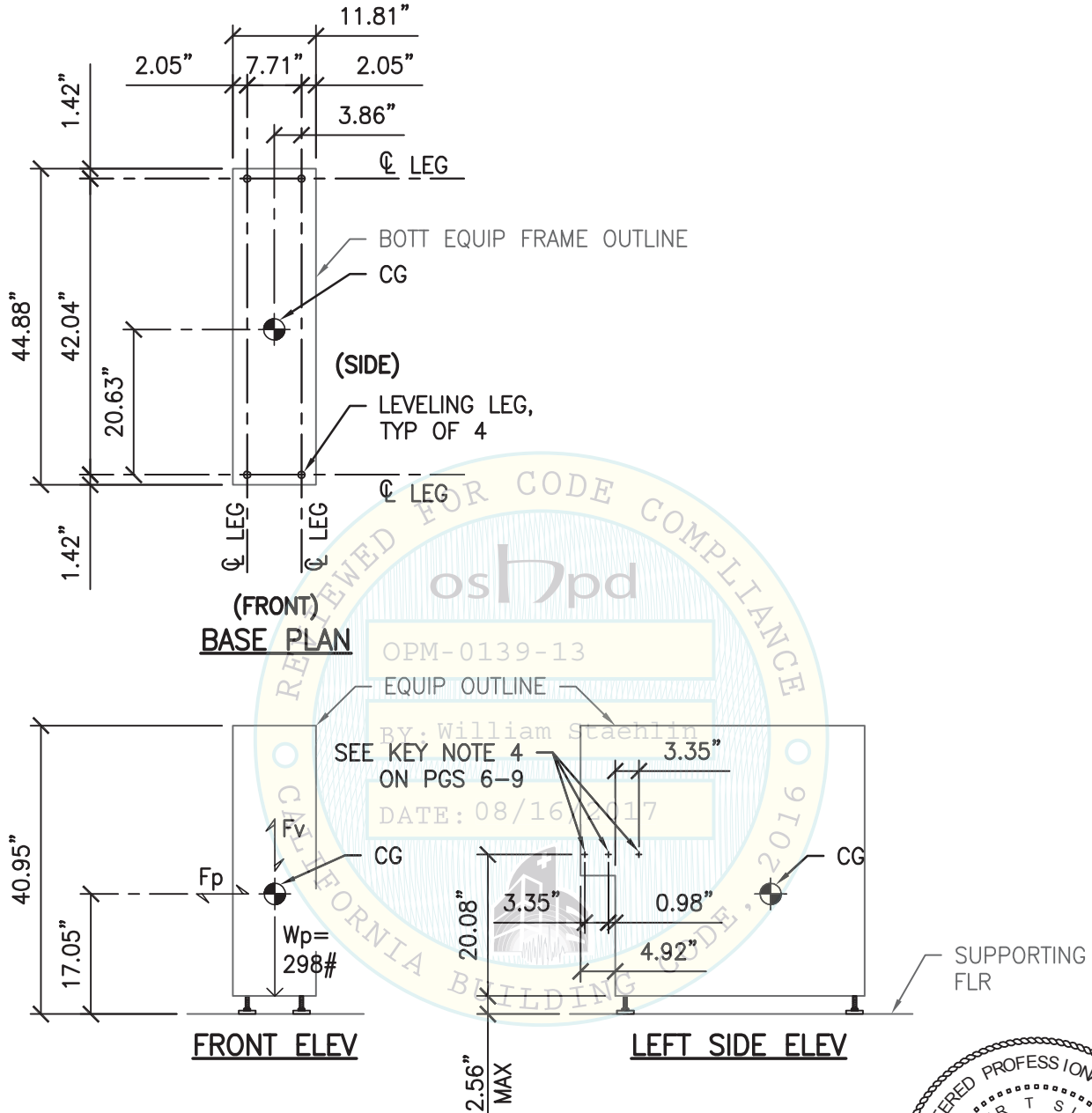
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: ANALYTICAL UNIT (AU) cobas e801
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 28 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time: Aug 15, 2017 - 05:41pm Login: camachom DimScale: 1 LScale: 6



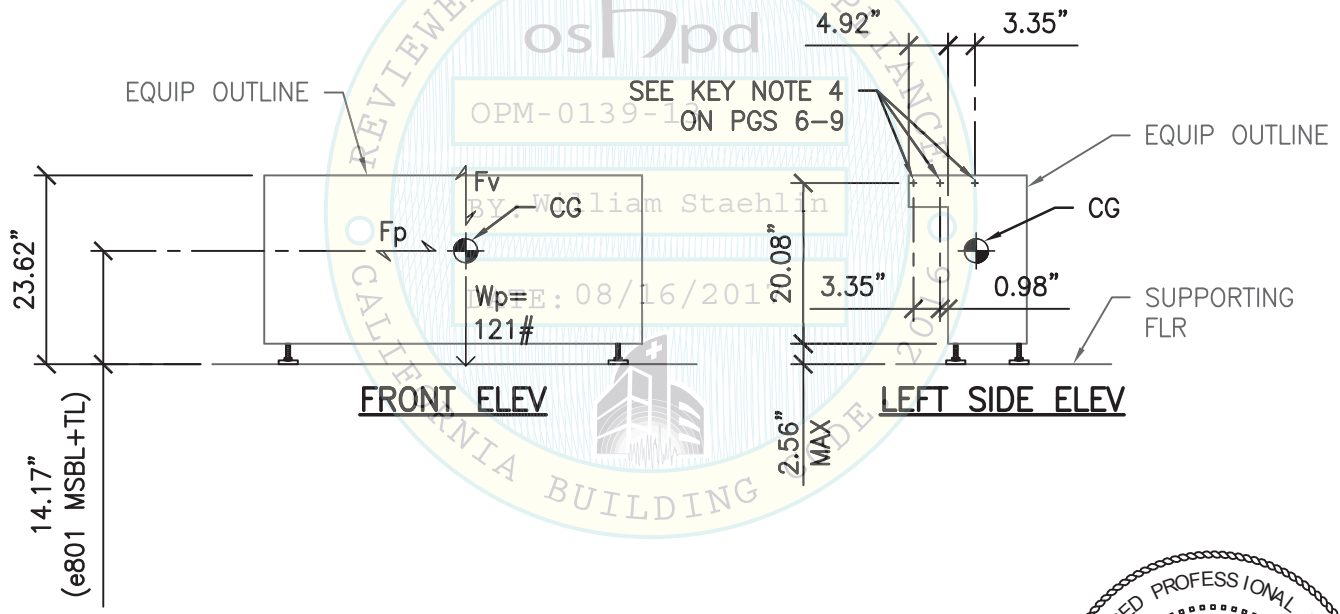
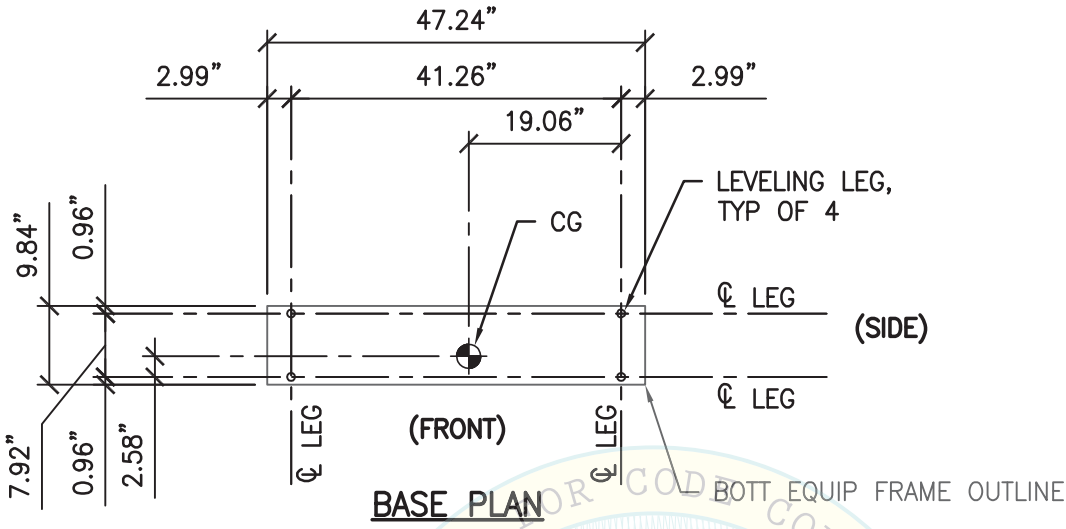
- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: SUS430 & JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: MODULE SAMPLE BUFFER (MSB) FOR e801
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 29 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017 -05:41pm Login:cmachom DimScale:1 LTScale:6



- NOTES:**
1. FOR SEISMIC BRACKET LOCATIONS & ORIENTATION SEE SYSTEM COMBINATION PLANS.
 2. WHEELS NOT SHOWN FOR CLARITY.
 3. FRAME MATERIAL: JFE-CC-EZ-JN 20/20.
 4. REFER TO PG 27 FOR FRAME MATERIAL PROPERTIES.



SHEET TITLE: MODULE SAMPLE BUFFER LINE (MSBL W/ TL OR DL) FOR e801
PLAN & ELEVATIONS

<p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p>	TEL (916) 920-2020 www.cyseng.com	Job No: 17035 Date: 08/15/2017 Page: 30 of 30
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L:\Jobs\17035 Roche - e801 addition to OPM-0139-13\ACAD\STRU\S1.dwg Time:Aug15,2017-05:41pm Login:cmachom DimScale:1 LTScale:6