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

OFFICE USE ONLY

APPLICATION #: OPM-0595

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Abbott Diagnostics Division

Manufacturer's Technical Representative: Claudia Moreno

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (972) 518-7691 Email: claudia.moreno@abbott.com

Product Information

Product Name: Accelerator a3600

Product Type: Unified workstation automated pre/post analytical processing laboratory instruments

Product Model Number: De-capper, De-sealer, Re-capper, Re-sealer, c4000, c8000, c16000, i1000sr, i2000sr, Cartesian Centrifuge, Input/Output Module, Aliquoter, Tube Storage (15,000 tube capacity), Bulk Input Module, Bulk Output Module, Rack Input Module, Rack Input Module, Rack Output Module, U-Turn Module, T-Turn Module, L-Turn Module, Tube Storage (9,000 tube capacity).

General Description: The ACCELERATOR a3600 is a modular system designed to automate pre-analytical and post-analytical processing, sample-handling, and processing in the laboratory. The system consolidates multiple analytical instruments into a unified workstation by employing a common sample processing capability.

Applicant Information

Applicant Company Name: CYS STRUCTURAL ENGINEERS, INC.

Contact Person: Dieter Siebald

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

Telephone: 916-920-2020 Email: dieters@cyseng.com

Title: Structural Engineer/Project Manager

Registered Design Professonal Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald California License Number: S4346

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

Telephone: (916) 920-2020 Email: dieters@cyseng.com

OSHPD Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP OSP Number:

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.

☒ Analysis

☐ Experience Data

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

OSHPD Approval

Date: 12/7/2020

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

ACCELERATOR ® a3600
AUTOMATED ANALYTICAL LABORATORY INSTRUMENTS
OPM–0595

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NOTES: THESE DRAWINGS ARE PREPARED FOR ABBOTT LABORATORIES, AN ILLINOIS CORPORATION, ABBOTT PARK, ILLINOIS.

1. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE OSHPD WEBSITE AND PROVIDE ONE COPY FOR THE INSPECTOR OF RECORD.

2. THIS PRE–APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE LABORATORY EQUIPMENT TO THE STRUCTURE.

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

NOT SEOR

SHEET TITLE: SHEET INDEX

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EQUIPMENT SUPPORTS & ATTACHMENTS

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ABBOTT LABORATORIES
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GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 CBC.
2. THIS OPM PROVIDES ANCHORAGE DESIGN RECOMMENDATIONS AND INFORMATION FOR INCORPORATION INTO A CONSTRUCTION DOCUMENT SUBMITTAL TO BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL APPROPRIATELY LICENSED TO DO SO AND WHOM SHALL FURNISH THE SUBMITTAL TO THE CODE-ENFORCEMENT OFFICIAL FOR APPROVAL AND PERMITTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
3. 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 COMPONENT IN ADDITION TO ALL OTHER LOADS. PROVIDE AND DESIGN SUPPLEMENTARY MEMBERS AS REQUIRED.
   - B. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
   - C. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN THE TEST VALUES TABLE ON PAGE 5 IS THE REQUIRED SPACING FROM ANCHORS OF OTHER DIAMETERS AND EMBEDMENTS WILL VARY.
   - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC 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.
   - F. THE SEOR SHALL VERIFY THAT THESE SEISMIC BRACKETS ARE COMPATIBLE WITH THE SITE CONDITIONS. THE RELATIVE FLATNESS OF THE FLOOR OR SLAB ON GRADE THAT WILL SUPPORT THE COMPONENTS MUST BE KNOWN SO THAT VARIATIONS IN THE RELATIVE FINISH FLOOR ELEVATION CAN BE COORDINATED WITH THE INSTALLATION REQUIREMENTS OF THE ABBOTT INSTRUMENTS. EACH SEISMIC BRACKET HAS BEEN DESIGNED TO ACCOMMODATE SOME AMOUNT OF VERTICAL HEIGHT ADJUSTMENT FOR LEVELING OF THE INSTRUMENT. IN SOME CASES THE FLOOR SURFACE IRREGULARITIES MAY EXCEED THE ABILITY OF THE INSTRUMENT TO BE RAISED OR LOWERED TO ACHIEVE THE SPECIFIED ELEVATION OF THE INSTRUMENT REQUIRED BY ABBOTT. IN SUCH CASES, ALTERATIONS TO THESE ANCHORAGE DESIGNS MAY BE NECESSARY. IT SHALL BE THE RESPONSIBILITY OF THE SEOR TO REVISE THESE DESIGNS AS DEEMED APPROPRIATE BY THE SEOR OR TO PROVIDE NEW ORIGINAL DESIGNS TO ANCHOR THE INSTRUMENTS. ALTERATIONS TO WORK CONTAINED WITHIN THIS OPM SHALL BE SUBMITTED TO OSHPD FOR REVIEW AND APPROVAL FOR ISSUANCE OF A CONSTRUCTION PERMIT.
   - G. CYS STRUCTURAL ENGINEERS, INC. IS NOT THE SEOR AS IT RELATES TO VERIFICATION OF SITE CONDITIONS AND REQUIRED OBSERVATIONS PER CHAPTER CHAPTER 17/17A OF THE IBC/CBC, UNLESS CYS STRUCTURAL ENGINEERS, INC. IS LISTED AS THE SEOR ON THE APPROVED CONSTRUCTED DOCUMENTS.

NOT SEOR

SHEET TITLE: GENERAL NOTES

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GENERAL NOTES CONTINUED:

4A. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND–LIGHTWEIGHT CONCRETE SHALL BE STAINLESS STEEL HILTI KB–TZ EXPANSION ANCHORS COMPLYING WITH ICC–ES ESR–1917 REISSUED MAY, 2019. ADHESIVE ANCHORS INSTALLED IN NORMAL WEIGHT CONCRETE SHALL BE ASTM F593 CW1 (316) INSTALLED USING HILTI HIT–RE 500 V3 ADHESIVE COMPLYING WITH ICC–ES ESR–3814, REVISED APRIL 2019.

B. INSTALLATION: INSTALL THE POST–INSTALLED 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 5.

C. TESTING:

- 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. FOR TENSION TESTING, THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES. FOR TORQUE TESTING, THE TEST LOAD SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD. REPORT OF TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. 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".
- 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. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE OR BY A CONTINUOUS LOSS OF JACKING PRESSURE.
  - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: 1. WEDGE TYPE: ONE–HALF (½) TURN OF THE NUT.

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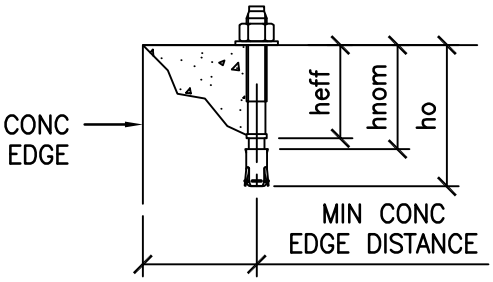
GENERAL NOTES CONTINUED:

4D. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE, SEE TABLE BELOW.

4E. POST-INSTALLED ANCHORS SHALL BE INSTALLED WITH FULL THREADED ENGAGEMENT OF THE NUT AND WASHER.

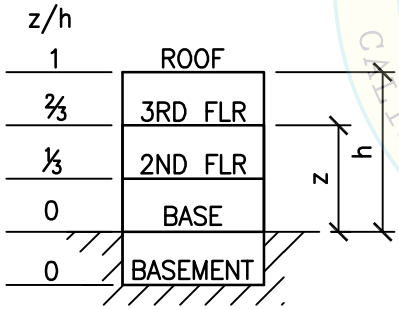


MECHANICAL ANCHOR

POST-INSTALLED MECHANICAL ANCHOR SCHEDULE

ANCHOR TYPE & DIA (INCH)	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) heff	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING UNO (INCH)	TEST LOAD		CONDITION OF ANCHORAGE
							TENSION LOAD (LBS)	TORQUE (FT-LBS)	
KB-TZ 304 SS 0.375"ø	2.3125	2.00	2.625	SEE DETAILS	12	4	1426	25	CASE 1
KB-TZ 304 SS 0.75"ø	3.5625	3.75	4.375	6	12	6	3844	60	CASE 2

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



BLDG ELEV

CASE 1: ANCHORAGE DTLS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h <= 1.0), IT IS ASSUMED THAT THE FLRS ARE BUILT OF A MIN 3.25" NWC OR SAND-LWC TOPPING OVER MTL DECK (f'c = 3000 PSI, MIN).

CASE 2: ANCHORAGE DTLS 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), EXCEPT AT TUBE STORAGE UNITS WHERE THE SOG THICKNESS MUST BE AT LEAST 6", UNO.

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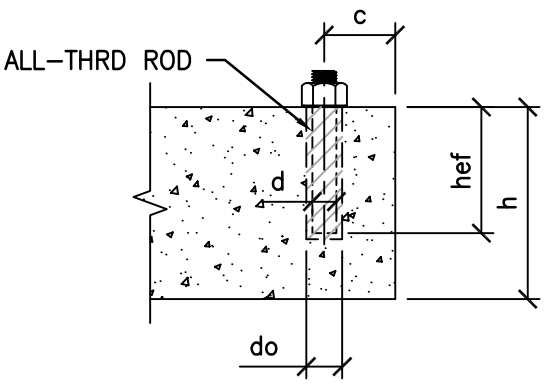

ADHESIVE ANCHOR
(THRD ROD)

POST–INSTALLED ADHESIVE ANCHOR SCHEDULE

ANCHOR TYPE & DIA (INCH) d	HOLE DIA (INCH) do	EFFECTIVE EMBED (INCH) hef	MIN CONC THICKNESS (INCH) h	MIN CONC EDGE DISTANCE (INCH) c	MIN AB SPACING UNO (INCH)	TENSION TEST LOAD (LBS)	CONDITION OF ANCHORAGE
½"ø HILTI HAS–R (ASTM F593 CW1 316 SS) ALL THRD ROD	0.5625	2.75	4	12	3	2350	CASE 2
¾"ø HILTI HAS–R (ASTM F593 CW2 316 SS) ALL THRD ROD	0.875	3.75	6	12	14.25	3720	CASE 2

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GENERAL NOTES CONTINUED:

6. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA. WHERE S_{DS} IS LESS THAN OR EQ TO 2.49.
7. COORDINATE THE ANCHOR BOLT LAYOUT WITH THE COMPONENT IN THE FIELD PRIOR TO SETTING ANCHOR BOLTS.
8. ANCHOR BRACKETS SHALL BE PAINTED WITH A RUST INHIBITIVE PRIMER FOLLOWED BY A COLOR COAT SELECTED BY THE HOSPITAL FACILITY OR MATCH THE COLOR OF THE BASE OF THE EQUIPMENT IF A COLOR IS NOT SPECIFIED BY THE HOSPITAL.
9. FASTENERS AND ASSOCIATED HARDWARE SHALL BE FIELD PAINTED TO MATCH BRACKETS AFTER INSTALLATION IS COMPLETE.
10. STRUCTURAL STEEL SHAPES AND CONNECTORS SHALL CONFORM TO THE FOLLOWING, UNO:
    - A. PLATES, ANGLES, BARS & MISCELLANEOUS SHAPES ..... ASTM A36
    - B. PLATES AS NOTED ..... ASTM A572 GR 50
    - C. MACHINE BOLTS ..... ASTM A307
11. UNIT COMPONENTS, TRACK SUPPORTS AND INTER-CONNECTION OF THE COMPONENTS TO BE PROVIDED BY ABBOTT. CONTRACTOR SHALL FURNISH AND INSTALL THE SEISMIC SUPPORTS AND ATTACHMENTS (INCLUDING SEISMIC BRACKETS, EXPANSION ANCHORS, THRU-BOLTS, STRUT PLATES BELOW SLABS, HIGH STRENGTH BOLTS TO REPLACE LEVELING LEGS, ETC.) IN CONJUNCTION WITH COMPONENT SETTING INSTRUCTIONS FROM ABBOTT FIELD INSTALLATION PERSONNEL.
12. DRAWING SCALES ARE NOT PROVIDED. DO NOT SCALE OFF OF THESE DRAWINGS. THE INTENT OF THESE DRAWINGS IS TO SHOW HOW TO FABRICATE THE SEISMIC BRACKET TO ANCHOR THE EQUIPMENT SPECIFIED. THE REPRESENTATIONS OF THE EQUIPMENT ARE ONLY INTENDED TO SHOW THE COORDINATION WITH THE SEISMIC BRACKETS.
13. 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 0.0625" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 0.0625")
    - 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.
14. TAKE CARE TO AVOID DAMAGING REBAR OR POST-TENSIONING TENDONS WHEN INSTALLING ANCHORS TO CONCRETE.
15. DRY BOLT AND NUT INSTALLATION TORQUES SHALL BE AS FOLLOWS:

BOLT OR NUT DIA	TORQUE (FT-LBS)
M5	5
M8	8
M10	15
M16	67
M20	136
0.25"	10
0.50"	40

    THESE VALUES DO NOT APPLY TO POST-INSTALLED CONCRETE ANCHORS.
16. FUTURE ALTERATIONS TO TRACK SYSTEMS, INCLUSIVE OF BUT NOT LIMITED TO TRACK AND TRACK COMPONENTS, TRACK MODULES AND OTHER INSTRUMENTS ATTACHED TO THE TRACK SYSTEM MUST BE REVIEWED BY OSHPD.

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WELDING NOTES:

1. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND STRUCTURAL WELDING CODE-STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1-15). SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENT. SUBMIT ALL WELDING PROCEDURES AND SPECIFICATIONS TO OWNER'S TESTING LABORATORY FOR REVIEW AND APPROVAL PRIOR TO BEGINNING FABRICATION.
2. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360-16, SECTION J2.2b.

DESIGN CRITERIA

ANCHORAGE DESIGN FOR ALL EQUIPMENT COMPONENTS IS PER 2019 CBC

ALL EQUIP (UNO)	TUBE STORAGE MODULES
ASCE 7-16 TABLE 13.6-1	(COMPONENTS #13 & #20)
OTHER MECHANICAL OR	ASCE 7-16 TABLE 13.6-1
ELECTRICAL COMPONENTS	WET-SIDE HVAC, CHILLERS
S_{DS} = 2.49	S_{DS} = 2.49
I_p = 1.5	I_p = 1.5
a_p = 1.0	a_p = 1.0
R_p = 1.5	R_p = 2.5
Ω_o = 1.5	Ω_o = 2.0

W_p AS NOTED ON COMPONENT DIMENSIONS SCHEDULE SHOWN ON PAGE 10 & 11

SEISMIC LOADS FOR CASE 1 - UPPER FLRS ABV THE BASE, z/h <= 1.0 (LRFD)

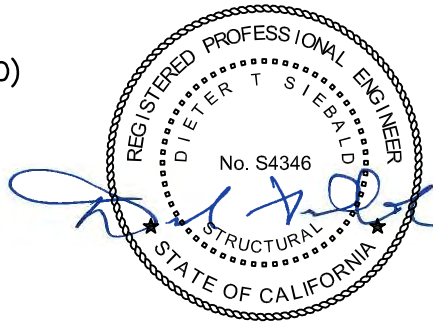
ALL EQUIP, UNO	TUBE STORAGE MODULES (COMPONENT #13 & #20)
$F_p = 2.98\ W_p$	$F_p = 1.79\ W_p$
$F_v = 0.50\ W_p$	$F_v = 0.50\ W_p$

SEISMIC LOADS FOR CASE 2 - SLAB AT OR BLW BASE, z/h = 0 (LRFD)

ALL EQUIP

$F_p = 1.12\ W_p$

$F_v = 0.50\ W_p$



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ABBREVIATIONS:

@	AT
AB	ANCHOR BOLT
ABV	ABOVE
ADDNL	ADDITIONAL
ADJ	ADJACENT
AISC	AMERICAN INSTITUTE FOR STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	ALLOWABLE STRENGTH DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLDG	BUILDING
BLW	BELOW
BOTT	BOTTOM
B.O.	BOTTOM OF
BRCG	BRACING
BTW	BETWEEN
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR OR CLEARANCE
CLSE	CALIFORNIA LICENSED STRUCTURAL ENGINEER
℄	CENTERLINE
CONC	CONCRETE
CONN	CONNECTION
CTR	CENTER
C_{max}	MAXIMUM COMPRESSION DUE TO SEISMIC FORCES
DBL	DOUBLE
DTL(S)	DETAIL(S)
DIA (ø)	DIAMETER
DIM (S)	DIMENSION(S)
DWG	DRAWING
(E)	EXISTING CONDITION
EA	EACH
EE	EACH END
ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FF	FINISHED FLOOR
FLG	FLANGE
FLR	FLOOR
F_p	HORIZONTAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS
FRMG	FRAMING
FT (')	FOOT/FEET
Fu	SPECIFIED TENSILE STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI
F_v	VERTICAL SEISMIC FORCE PER ASCE 7-10 SEISMIC FORCE REQUIREMENTS
F_y	SPECIFIED YIELD STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI
GA	GAUGE
GC	GENERAL CONTRACTOR
HEIGHT	HT
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
IN (")	INCH
KSI	KIPS PER SQUARE INCH
L	LENGTH
LBS	POUNDS
LFRS	LATERAL FORCE RESISTING SYSTEM
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LRFD	LOAD & RESISTANCE FACTOR DESIGN
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MB	MACHINE BOLT
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OH	OPPOSITE HAND
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PG(S)	PAGE(S)
PL	PLATE
PSI	POUNDS PER SQUARE INCH
R	RADIUS OF GYRATION
REQ	REQUIRED

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ABBREVIATIONS (CONT):

SC	SLIP CRITICAL
SCHED	SCHEDULE
SEOR	STRUCTURAL ENGINEER OF RECORD
SIM	SIMILAR
SLWC	SAND LIGHT WEIGHT CONCRETE
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STIFF	STIFFENER
STL	STEEL
T&B	TOP & BOTTOM
TEMP	TEMPORARY
THRD	THREAD OR THREADED
T_{max}	MAXIMUM TENSION DUE TO SEISMIC FORCE
T.O.	TOP OF
TOC	TOP OF CONCRETE
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
VERT	VERTICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE
V_{max}	MAXIMUM SHEAR DUE TO SEISMIC FORCE
W/	WITH
W_p	COMPONENT SELF-WEIGHT

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ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	NO.	COMPONENT	LEVELING FOOT DIMS		CG LOCATION			WEIGHT (W_p)
			WIDTH	DEPTH	$\bar{x}$	$\bar{y}$	$\bar{z}$	
TRACK SUPPORTED COMPONENTS		TYPICAL TRACK MODULE	90" MAX	11.50"	MIDSPAN	5.75"	26.9"	165#
	1.	DE-SEALER MODULE W/ TRACK MODULE[2]	90" MAX	11.50"	14" MIN	4.33"	27.95"	247#
	2.	DE-CAPPER MODULE W/ TRACK MODULE[2]	90" MAX	11.50"	14" MIN	4.33"	27.95"	247#
	3.	RE-CAPPER MODULE W/ TRACK MODULE[2]	90" MAX	11.50"	10" MIN	4.52"	34.5"	247#
	4.	SEALER MODULE W/ TRACK MODULE[2]	90" MAX	11.50"	7" MIN	3.96"	29.13"	234#
FREELY STANDING COMPONENTS	5.	ARCHITECT c4000 ANALYZER	45.67"	19.72"	21.75"	11.61"	41.50"	1132#
	6.	ARCHITECT c8000 ANALYZER	58.58"	23.86"	31.49"	10.87"	39.25"	1425#
	7.	ARCHITECT c16000 ANALYZER	58.82"	23.86"	28.65"	10.47"	39.25"	1545#
	8.	ARCHITECT i1000sr ANALYZER	46.20"	20.64"	26.00"	9.61"	40.00"	636#
	9.	ARCHITECT i2000sr ANALYZER	42.00"	30.25"	21.56"	13.57"	42.00"	1081#
	10.	CARTESIAN CENTRIFUGE MODULE	31.61"	12.40"	15.81"	6.20"	39.37"	827#
	11.	a3600 INPUT/OUTPUT MODULE	62.52"	15.63"	31.26"	7.81"	38.19"	882#
	12.	a3600 ALIQUOTER MODULE	45.83"	19.25"	24.41"	10.04"	25.12"	661#

NOTES:

1. SEE PG 12 FOR MORE INFORMATION.
2. COMPONENT WEIGHT (Wp) INCLUDES WEIGHT OF 2- TOP TRACKS, BOTTOM TRACK, AND TWO SUPPORT FRAMES AS SHOWN ON PG 16. ALSO REFER TO FOOTNOTE 1 ON PG 16.
3. THE DIMENSIONS FURNISHED ABOVE ARE NOT INTENDED TO BE USED TO LAYOUT THE COMPONENTS. THIS INFORMATION IS BEING FURNISHED FOR USE BY THE SEOR.

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

NOT SEOR

SHEET TITLE: COMPONENT DIMENSIONS SCHEDULE

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

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NO.	COMPONENT	LEVELING FOOT DIMS		CG LOCATION			WEIGHT (W_p)
		WIDTH	DEPTH	$\bar{x}$	$\bar{y}$	$\bar{z}$	
13	INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY)	67.52"	29.53"	40.26"	14.76"	46.14"	3087#
14.	BULK INPUT MODULE	22.99"	27.05"	7.32"	14.45"	23.62"	441#
15.	RACK INPUT MODULE	11.22"	43.09"	4.76"	20.47"	24.49"	441#
16.	RACK OUTPUT MODULE	11.22"	43.09"	4.76"	20.47"	24.49"	441#
17.	U-TURN MODULE	90" MAX	11.50"	6" MIN	9.80"	31.5"	222#
18.	T-TURN MODULE	14.09"	32.91"	9.29"	7.83"	27.10"	440#
19.	L-TURN MODULE	26.22"	25.43"	14.17"	12.01"	26.97"	302#
20.	INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY)	67.52"	29.53"	42.43"	14.76"	42.70"	2392#
21.	TUBE STORAGE INPUT/OUTPUT MODULE	53.15"	15.55"	29.53"	7.52"	30.0"	275#
22.	HETTICH CENTRIFUGE	17.72"	18.50"	8.86"	9.25"	19.69"	827#
23.	WIDE BELT BUFFER (240 SAMPLE CAPACITY)	11.50"	20.19"	5.91"	13.73"	29.65"	209#
24.	WIDE BELT BUFFER (600 SAMPLE CAPACITY)	41.34"	11.50"	20.17"	9.1"	29.53"	342#

NOTE: SEE PG 12 FOR MORE INFORMATION.

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

NOT SEOR

SHEET TITLE: COMPONENT DIMENSIONS SCHEDULE

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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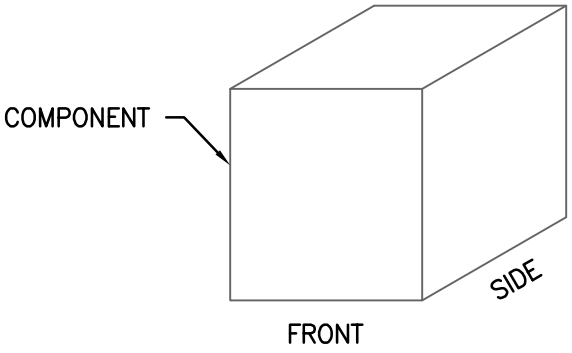
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



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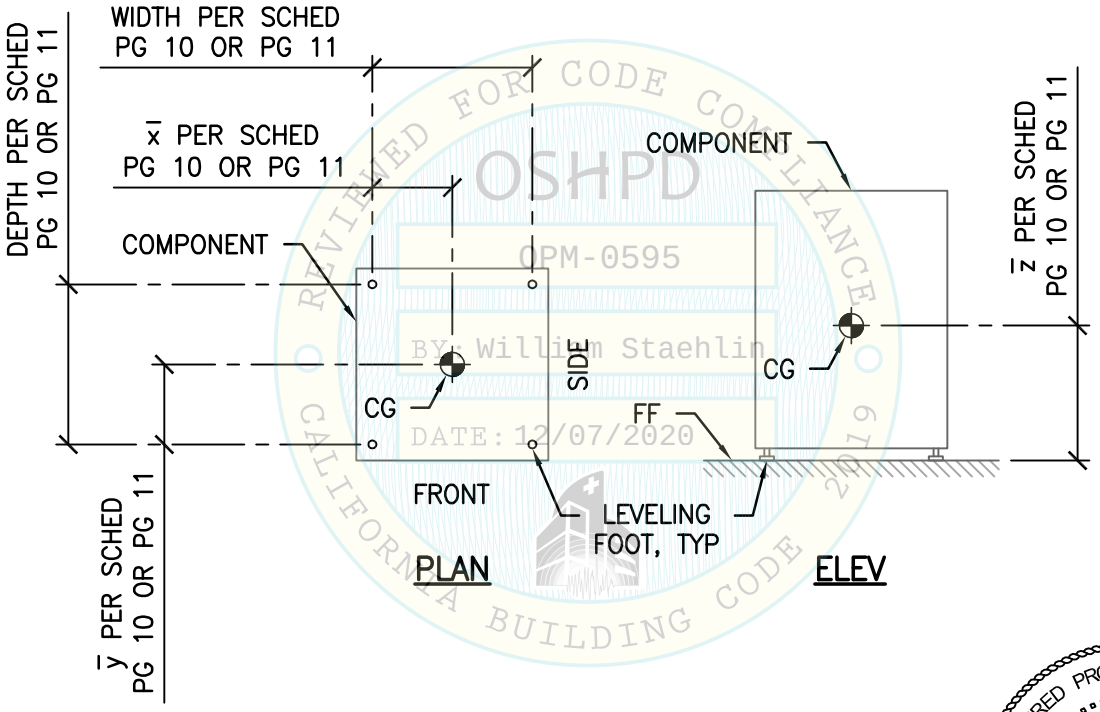

PLAN ELEV

NOT SEOR

SHEET TITLE: COMPONENT DIMENSIONS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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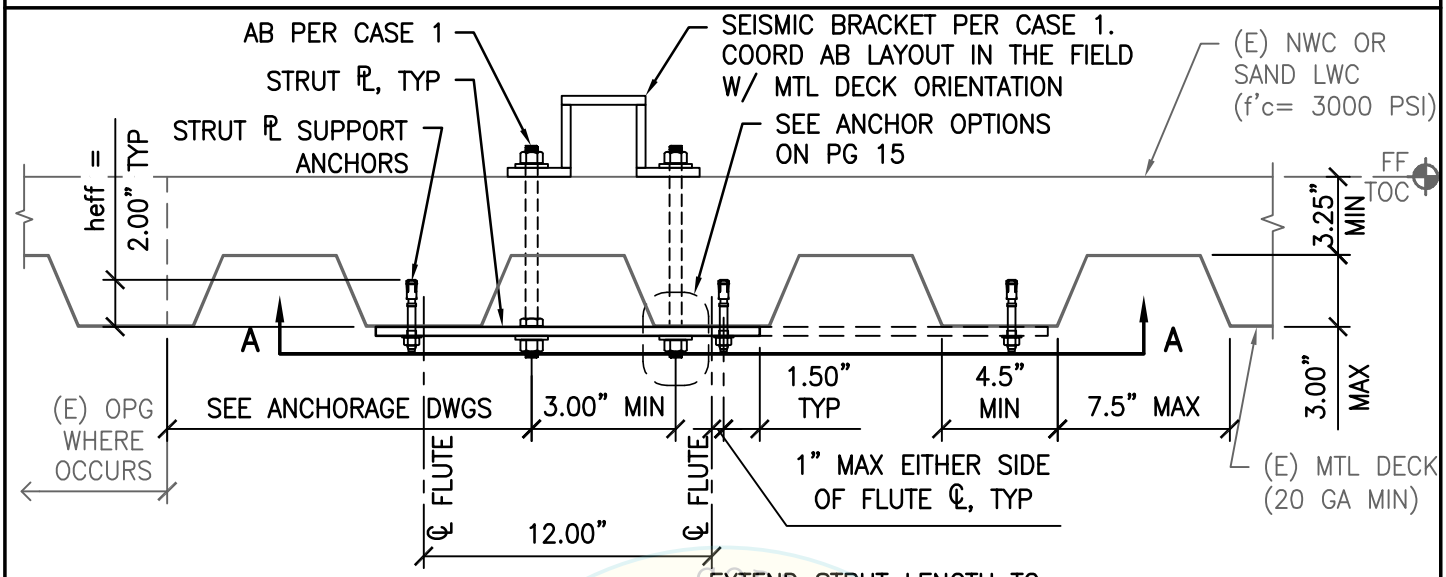
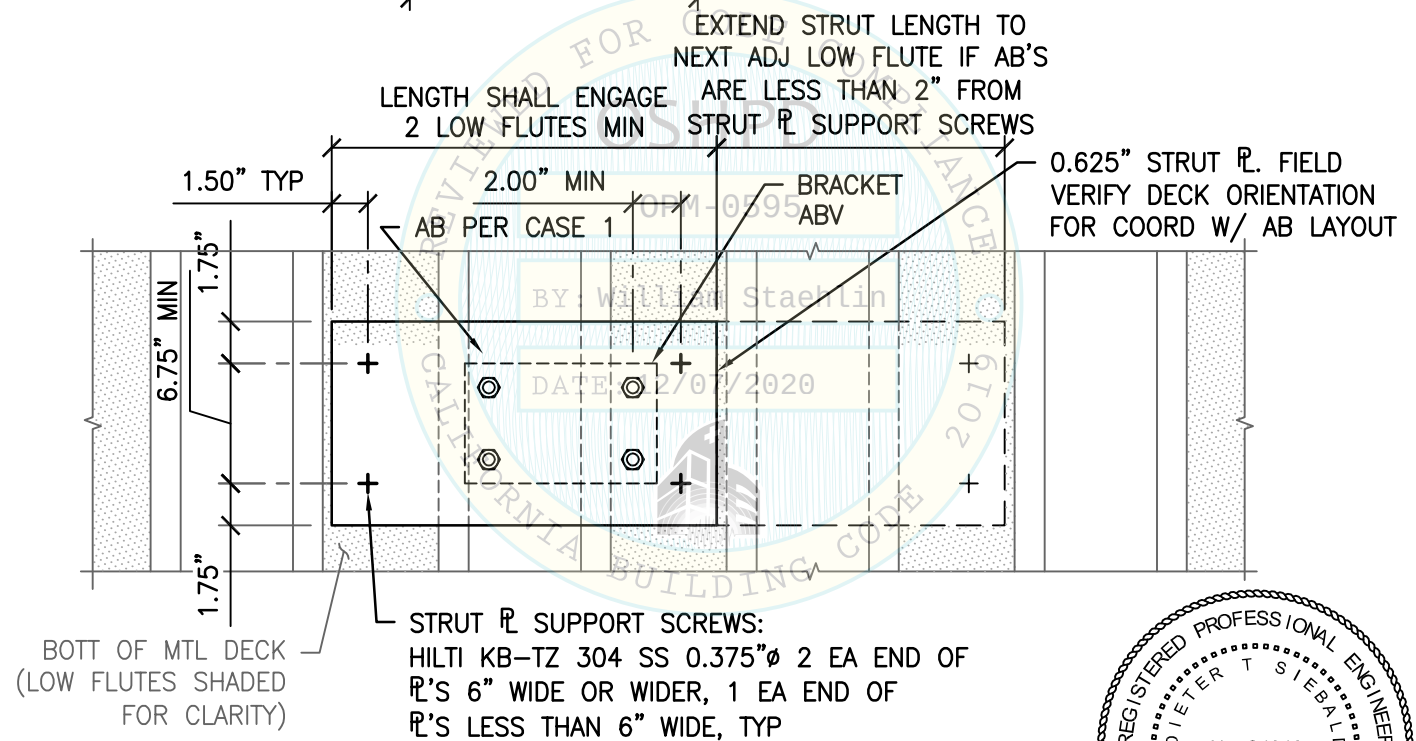
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS





SECTION A-A

NOTE:

1. THE GENERAL CONTRACTOR SHALL PROVIDED AND INSTALL ALL STRUTS, SEISMIC BRACKETS, SHIMS AND FASTENERS.
2. FOR AB SPACED MORE THAN 3.5" APART 2-3.5" WIDE STRUT ℄'S SIM TO DTL ON PG 14 MAY BE USED

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

NOT SEOR

SHEET TITLE: TYPICAL STRUT DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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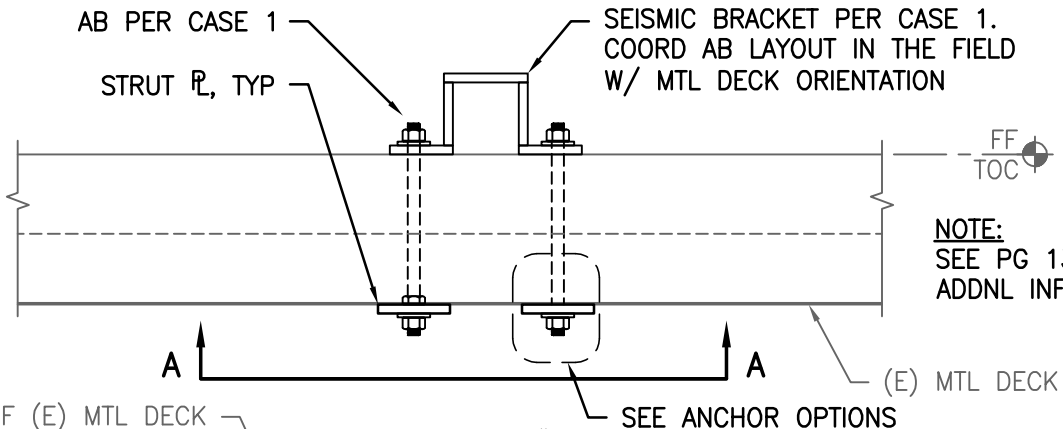
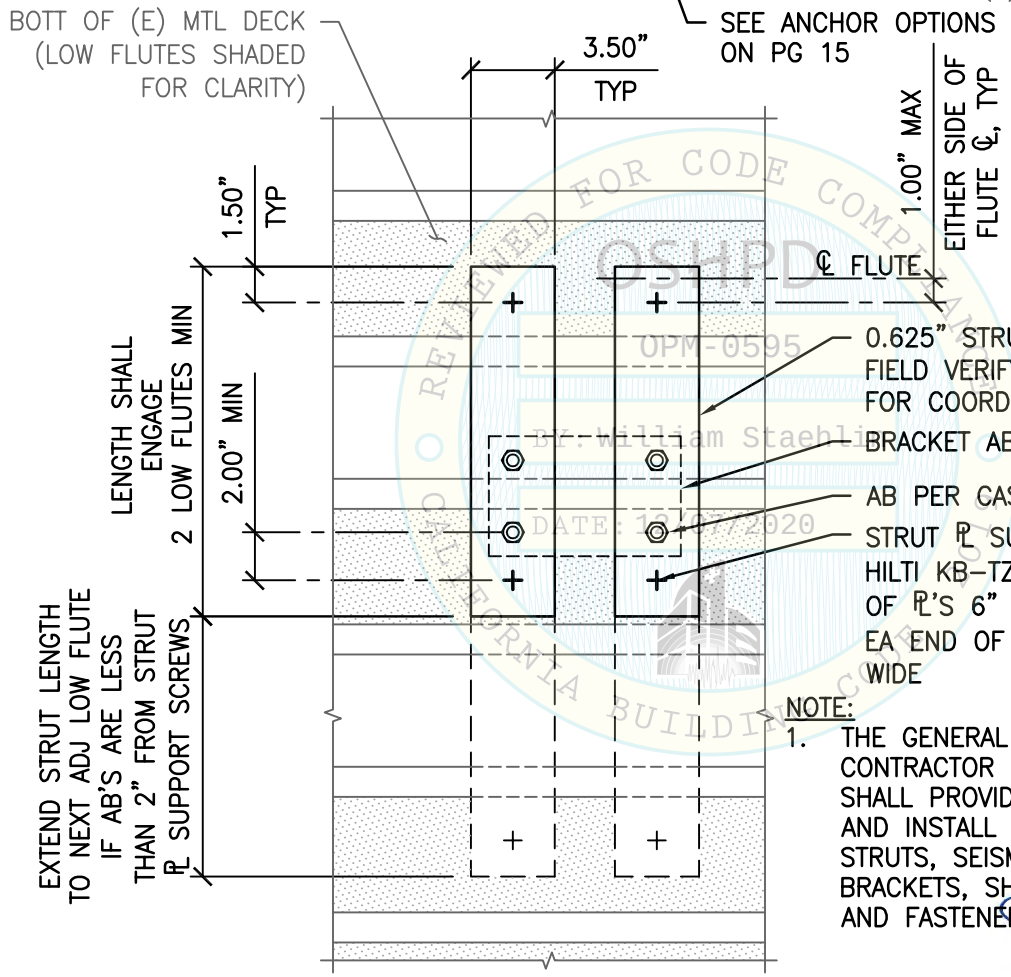
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



NOTE:
SEE PG 13 FOR
ADDNL INFO



NOTE:
A SINGLE STRUT ℄ SIM
TO DTL ON PG 13
MAY BE USED

NOTE:
1. THE GENERAL CONTRACTOR SHALL PROVIDED AND INSTALL ALL STRUTS, SEISMIC BRACKETS, SHIMS AND FASTENERS.

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

NOT SEOR

SECTION A–A

SHEET TITLE: TYPICAL STRUT DETAIL

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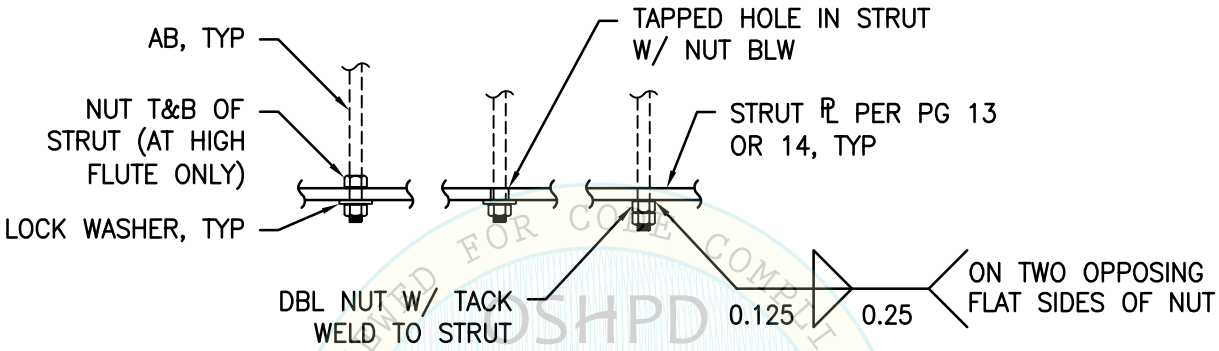

ANCHOR OPTIONS

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

NOT SEOR

SHEET TITLE: TYPICAL STRUT DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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TEL (916) 920-2020
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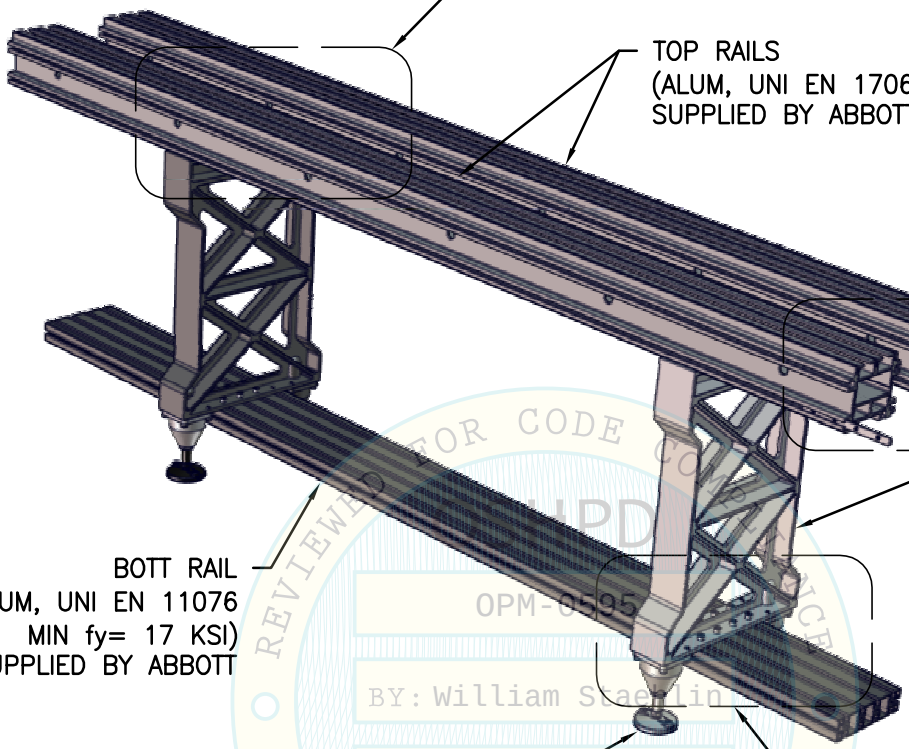
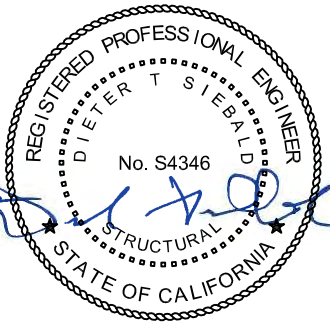
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



NOTES:

1. MAX OPERATING WEIGHT Wp= 165.00 LBS INCLUDING SUPPORT FRAMES, T&B RAIL, TRACK, COVERS, ETC.
2. COMPONENT SUB-ASSEMBLY CONNECTIONS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR.
3. THE TYP TRACK MODULE IS USED FOR COMPONENTS 1, 2, 3, 4 & 17. SEE PGS 19-41.
4. THE TYP TRACK MODULE COMPONENTS (TRACK SUPPORT FRAMES, T&B RAILS) ARE USED FOR COMPONENTS 18 & 19. SEE PGS 42-51.
5. SEISMIC BRACKETS ARE REQUIRED AT ALL TRACK FRAMES.
16. FUTURE ALTERATIONS TO TRACK SYSTEMS, INCLUSIVE OF BUT NOT LIMITED TO TRACK AND TRACK COMPONENTS, TRACK MODULES AND OTHER INSTRUMENTS ATTACHED TO THE TRACK SYSTEM MUST BE REVIEWED BY OSHPD.



NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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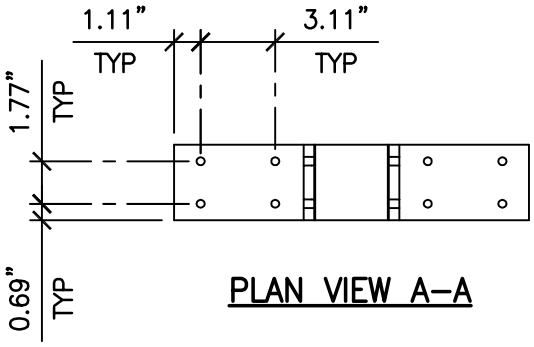
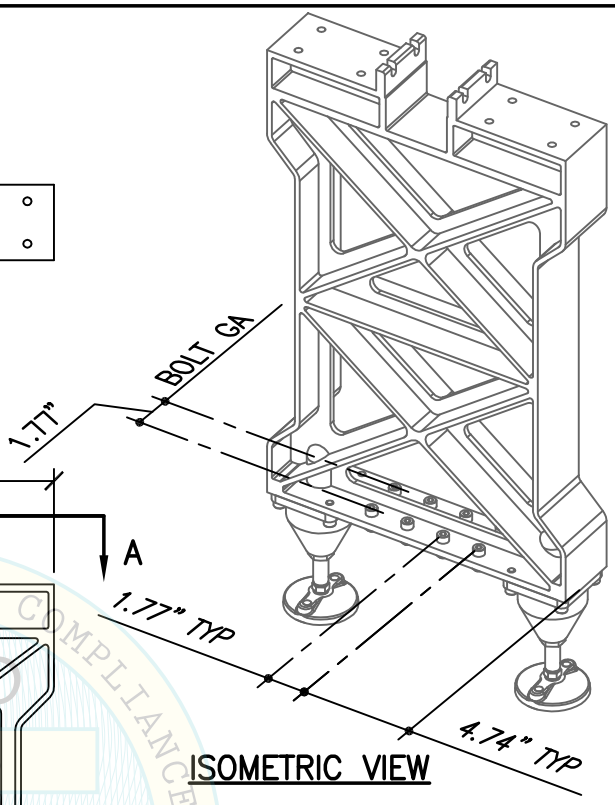
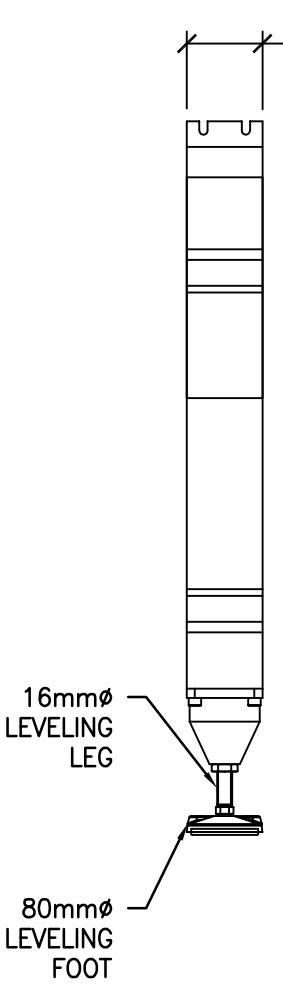
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



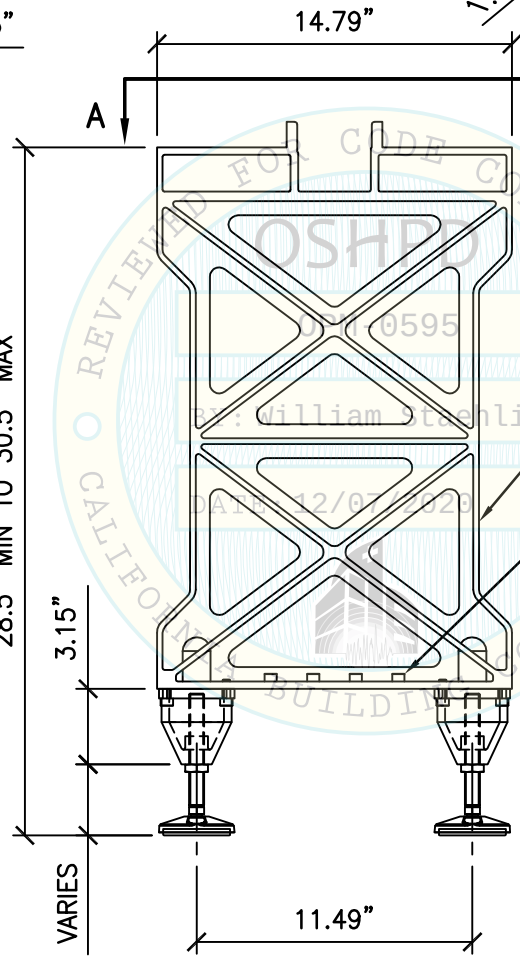
PLAN VIEW A–A



ISOMETRIC VIEW



SIDE VIEW



ELEV VIEW

TRACK SUPPORT FRAME

M8x20 UNI 5931–8.8, TYP
(8 TOTAL AT BOTT RAIL,
NOT SHOWN, 6 TOTAL AT
EA TOP RAIL, NOT SHOWN)
Fy= 96 KSI.

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE
TRACK SUPPORT FRAME

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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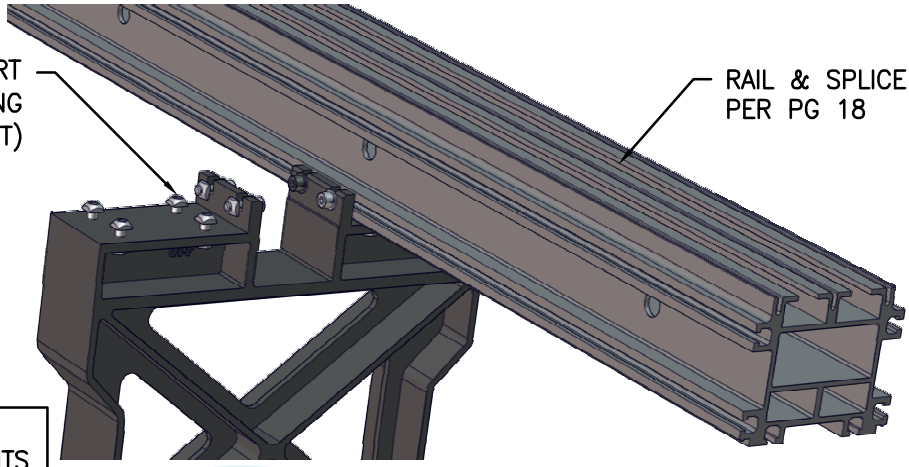
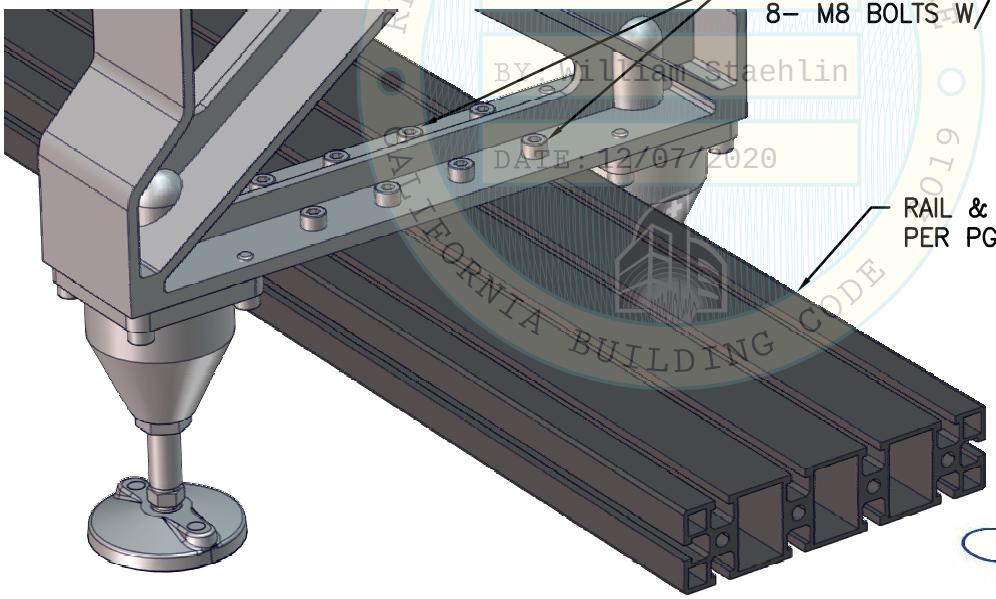
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

CONNECT TOP RAILS TO SUPPORT FRAME W/ 6– M8 BOLTS W/ SPRING NUTS EA RAIL. (CONN BY ABBOTT)



SEE PG 16A FOR MORE INFO REGARDING BOLTED ATTACHMENTS OF THE RAILS TO THE TRACK SUPPORT FRAME.

TOP RAIL CONN



BOTT RAIL CONN

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE
TOP & BOTTOM RAIL CONNECTION

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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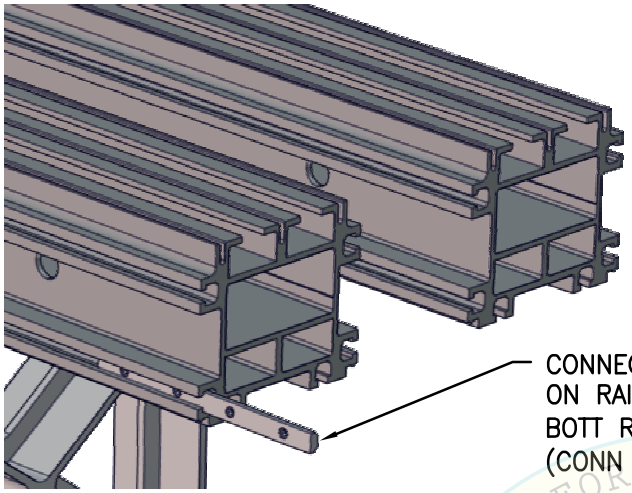
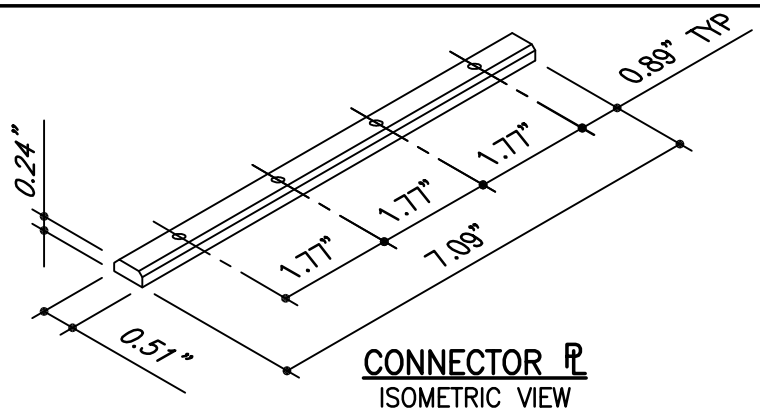
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

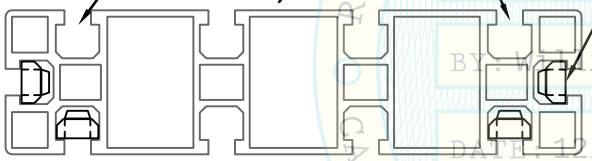




CONNECTOR ℄
ISOMETRIC VIEW

CONNECTOR ℄ W/ 4– M8 SET SCREWS. CTR ON RAIL SPLICE. 6 EA TOP RAIL & 4 AT BOTT RAIL. (16 TOTAL) (fy= 96 KSI MIN) (CONN BY ABBOTT)

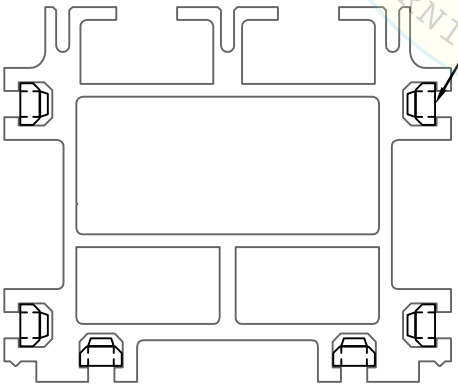
RAIL SPLICE



ALT CONNECTOR ℄ LOCATION (℄ NOT SHOWN)

CONNECTOR ℄ (STEEL, Fe 37 GALVANIZED MIN fy= 37 KSI), TYP OF 4 AT BOTT RAIL SECTION PROPERTIES:
A= 0.1070 IN^2; S= 0.00353 IN^3; I= 0.000454 IN^4
TWO CONNECTOR PLATES ARE REQ AT ES OF THE RAIL IN ANY OF THE 3 LOCATIONS.

BOTT RAIL



CONNECTOR ℄ (STEEL, Fe 37 GALVANIZED MIN fy= 36 KSI), TYP OF 6 AT TOP RAIL SECTION PROPERTIES:
A= 0.1070 IN^2; S= 0.00353 IN^3;
I= 0.000454 IN^4

TOP RAIL

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE
RAIL SPLICE DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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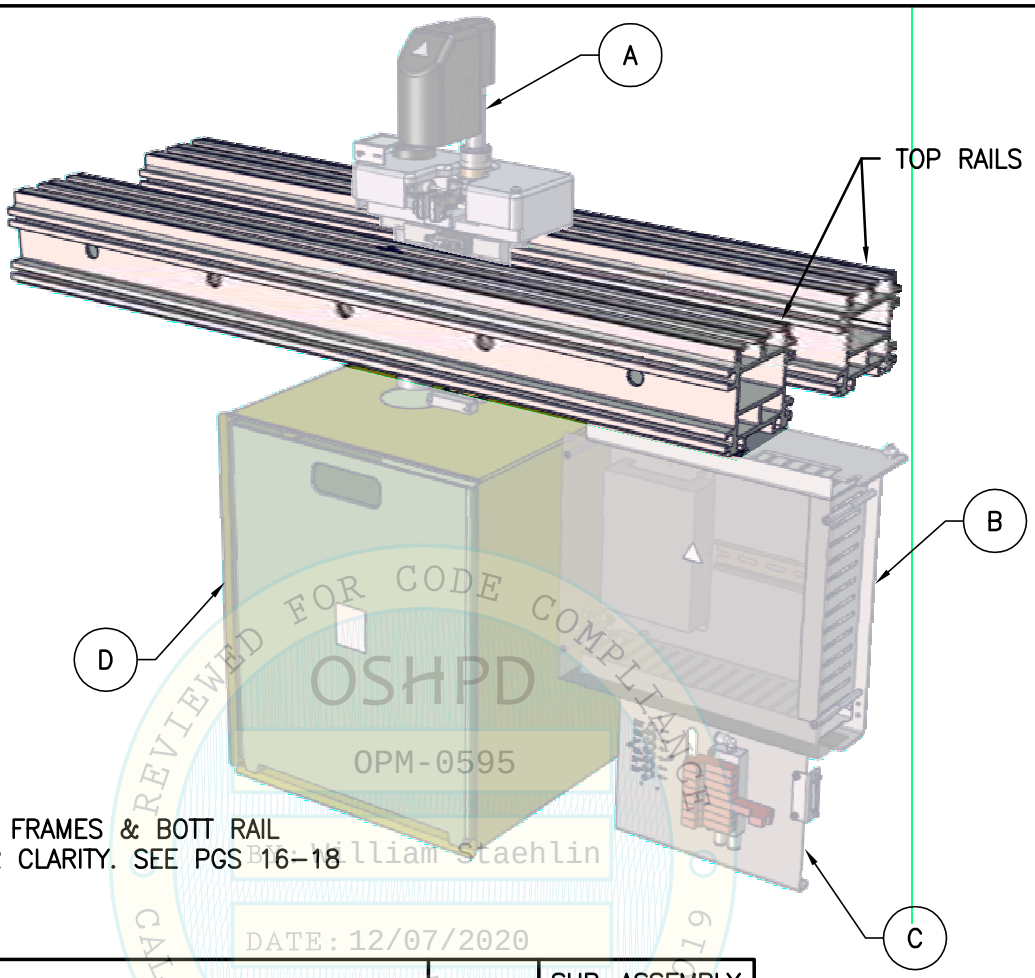
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



TRACK SUPPORT FRAMES & BOTT RAIL
NOT SHOWN FOR CLARITY. SEE PGS 16–18

ITEM	SUB–ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB–ASSEMBLY ATTACHMENT DTL PG
A	DE–SEALER BODY	10	20
B	ELECTRICAL CONTROL PANEL	11	21
C	PNEUMATIC PANEL	6	22
D	WASTE BIN	26	23
MISC	PIT LANE, COVERS, WIRES, TUBES	29	N/A
TRACK	SUPPORT FRAMES, T&B RAILS	165	16–18
	TOTAL WEIGHT	247	

*COMPONENT SUB–ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 1: DE-SEALER MODULE

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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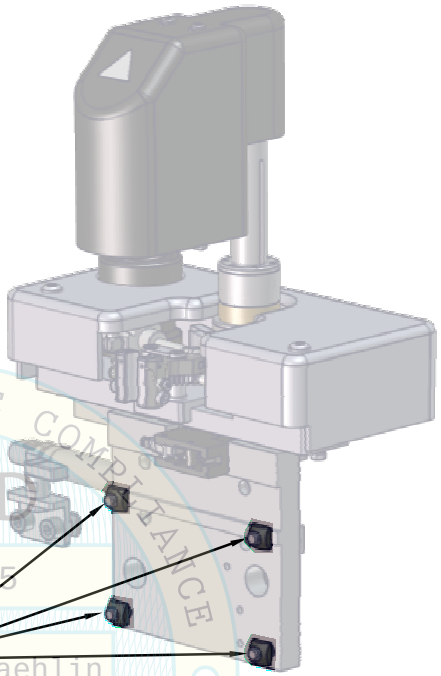
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.



ATTACH DE-SEALER BODY TO TOP RAIL W/
4- M8 SCREWS W/ SPRING NUTS
(fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

A DE-SEALER BODY

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

NOT SEOR

SHEET TITLE: COMPONENT 1: DE-SEALER MODULE
DE-SEALER BODY ATTACHMENT

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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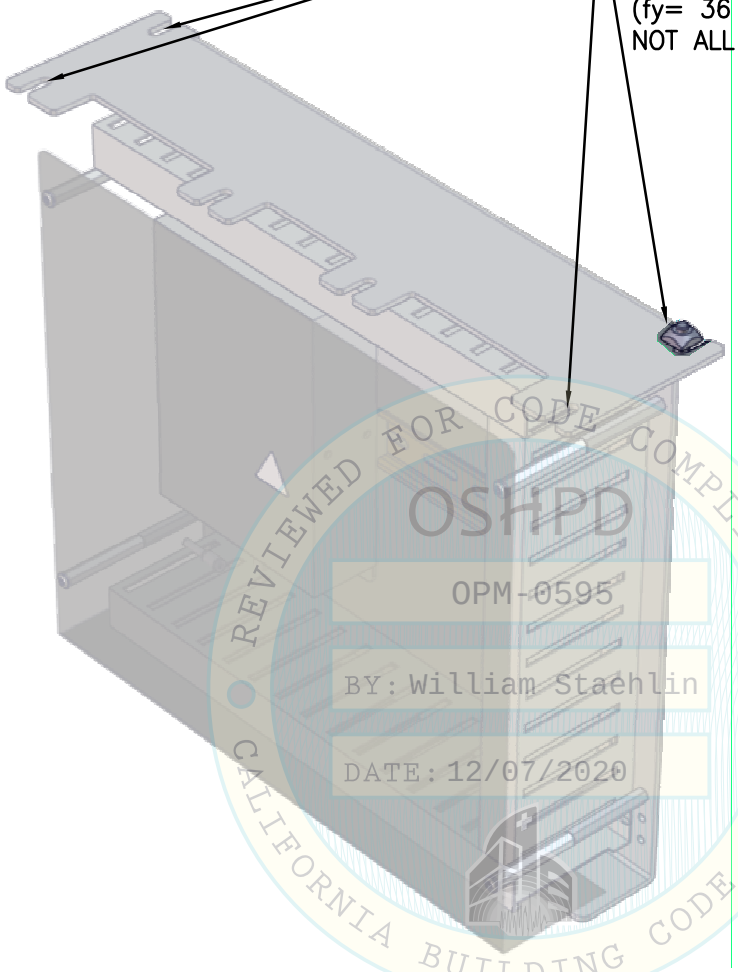
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



B ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 1: DE-SEALER MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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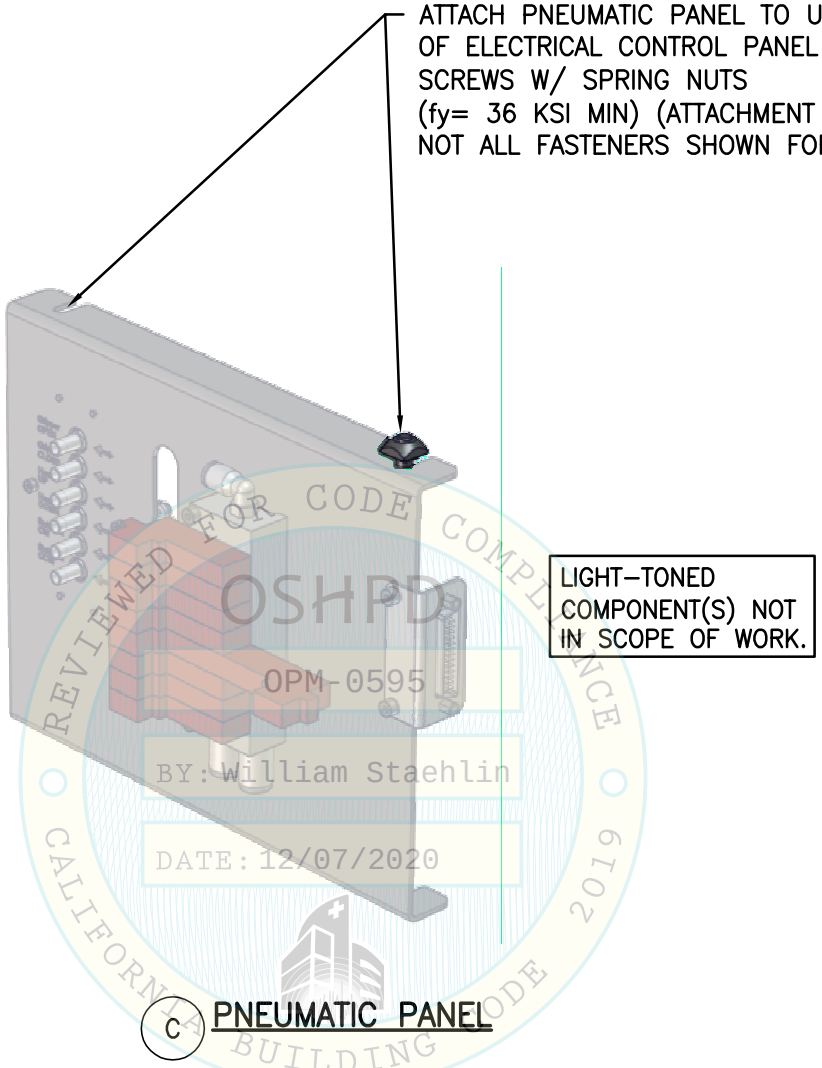
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



C PNEUMATIC PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 1: DE-SEALER MODULE
PNEUMATIC PANEL ATTACHMENT

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

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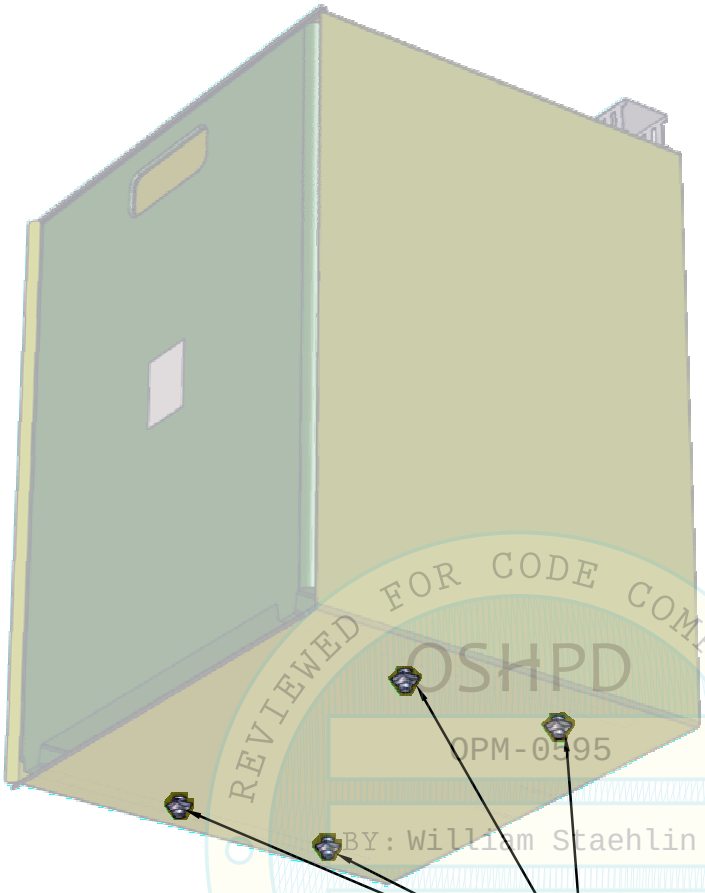
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH WASTE BIN TO TOP OF BOTT RAIL W/ 4- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

D WASTE BIN

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

NOT SEOR

SHEET TITLE: COMPONENT 1: DE-SEALER MODULE
WASTE BIN ATTACHMENT

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

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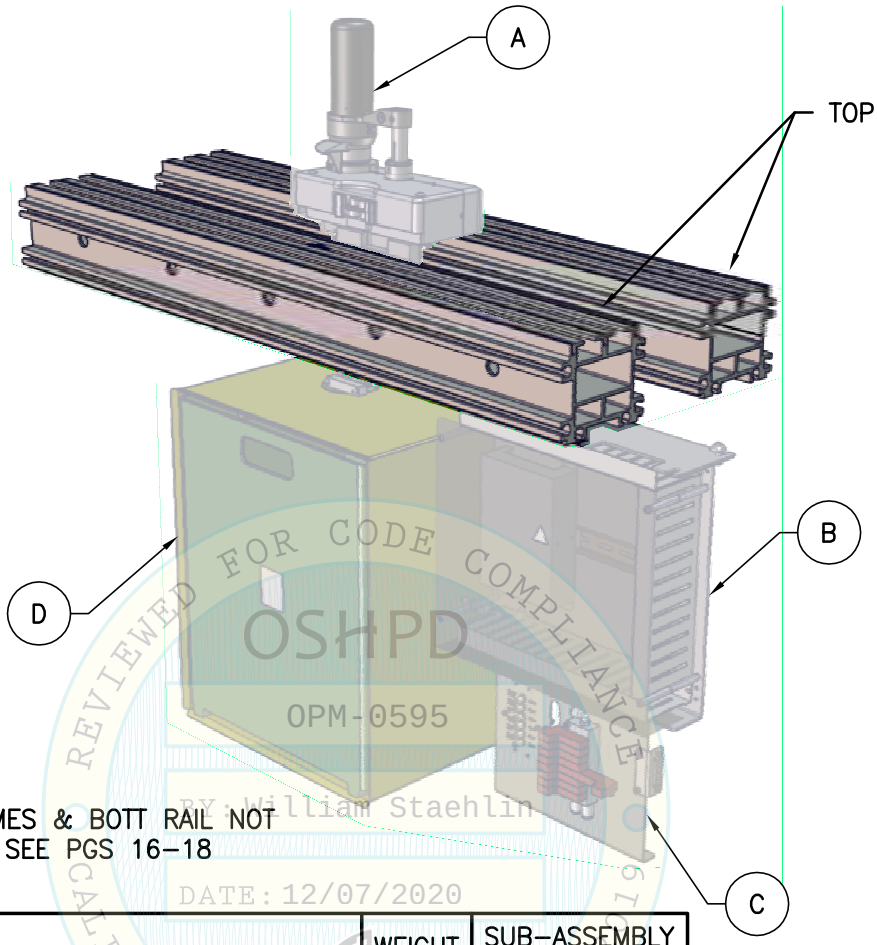
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

TRACK SUPPORT FRAMES & BOTT RAIL NOT SHOWN FOR CLARITY. SEE PGS 16-18

	SUB-ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB-ASSEMBLY ATTACHMENT DTL PG
A	DE-CAPPER BODY	15	25
B	ELECTRICAL CONTROL PANEL	11	26
C	PNEUMATIC PANEL	6	27
D	WASTE BIN	26	28
MISC	PIT LANE, COVERS, WIRES, TUBES, ETC.	24	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	165	16-18
	TOTAL WEIGHT	247	

*COMPONENT SUB-ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 2: DE-CAPPER MODULE

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

Job No:	20064
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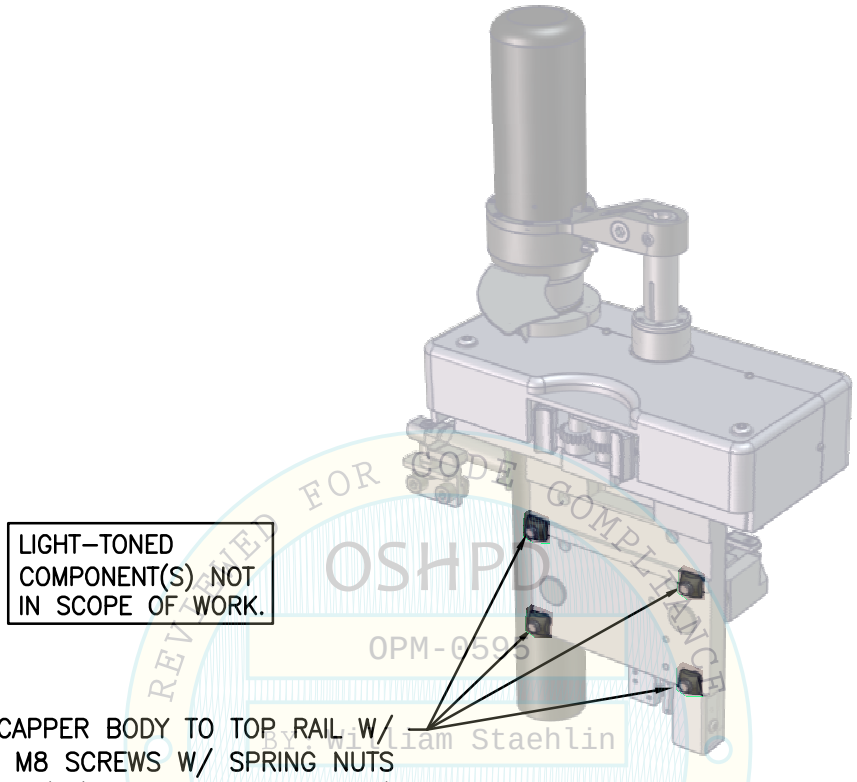
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



A DE-CAPPER BODY

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

NOT SEOR

SHEET TITLE: COMPONENT 2: DE-CAPPER MODULE
DE-CAPPER BODY ATTACHMENT

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

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ABBOTT LABORATORIES
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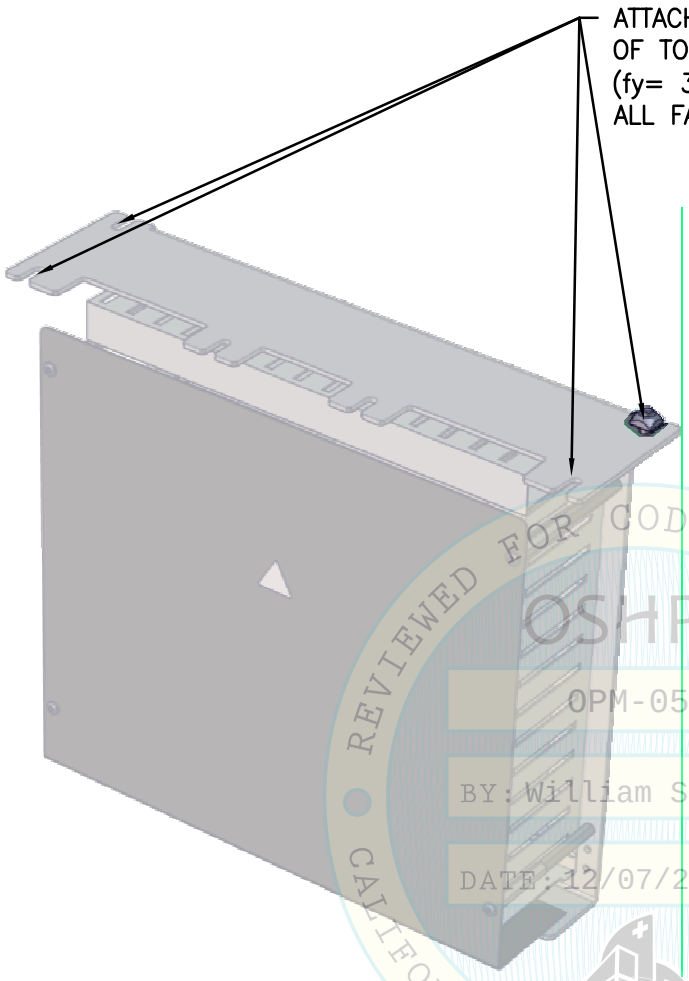

B ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 2: DE-CAPPER MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

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

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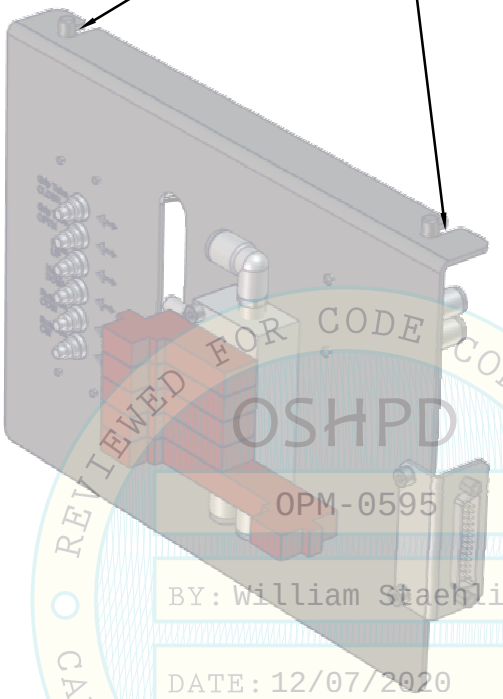
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



C PNEUMATIC PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 2: DE-CAPPER MODULE
PNEUMATIC PANEL ATTACHMENT

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

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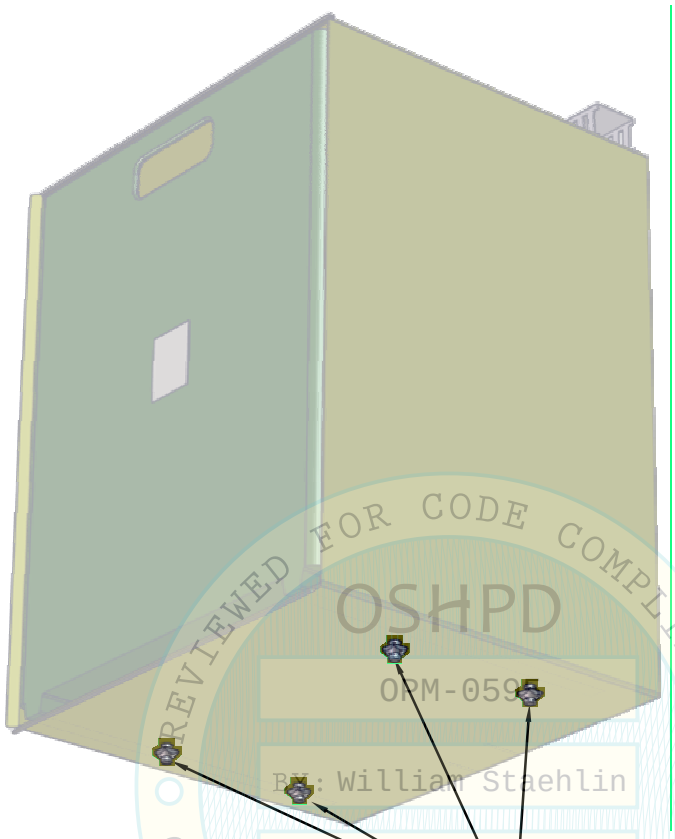
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH WASTE BIN TO TOP OF BOTT RAIL W/ 4- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

D WASTE BIN

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

NOT SEOR

SHEET TITLE: COMPONENT 2: DE-CAPPER MODULE
WASTE BIN ATTACHMENT

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

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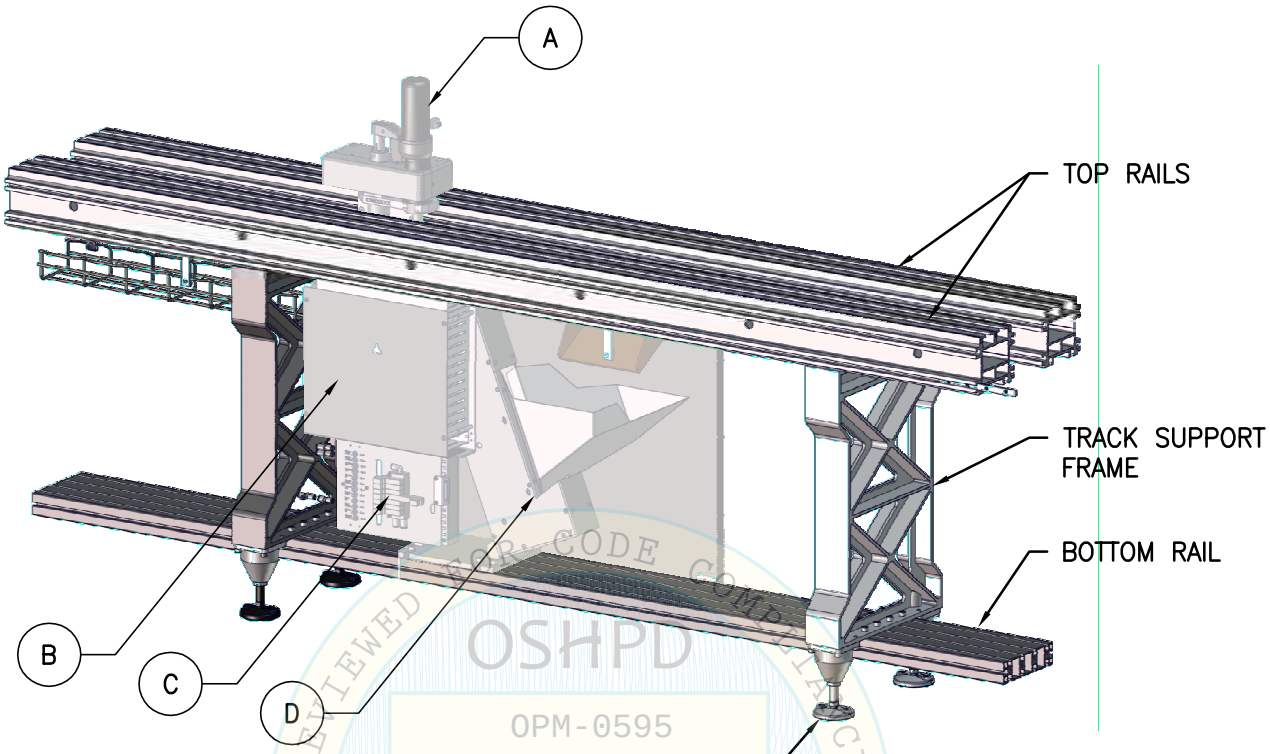
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ITEM	SUB–ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB–ASSEMBLY ATTACHMENT DTL PG
A	RE–CAPPER ASSEMBLY	13	30
B	ELECTRICAL CONTROL PANEL	11	31
C	PNEUMATIC PANEL	4	32
D	RE–CAPPER SWITCH CAP GROUP	21	33
MISC	BUFFER LANE, COVERS, WIRES, TUBES, ETC.	33	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	165	16–18
	TOTAL WEIGHT	247	

*COMPONENT SUB–ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 3: RE-CAPPER MODULE

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

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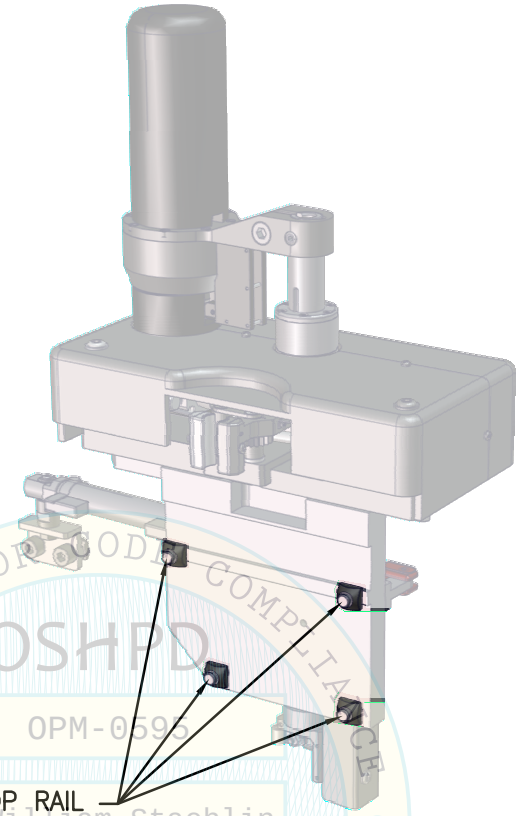
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH RE-CAPPER ASSEMBLY TO TOP RAIL W/ 4- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

A RE-CAPPER ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 3: RE-CAPPER MODULE
RE-CAPPER ASSEMBLY ATTACHMENT

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

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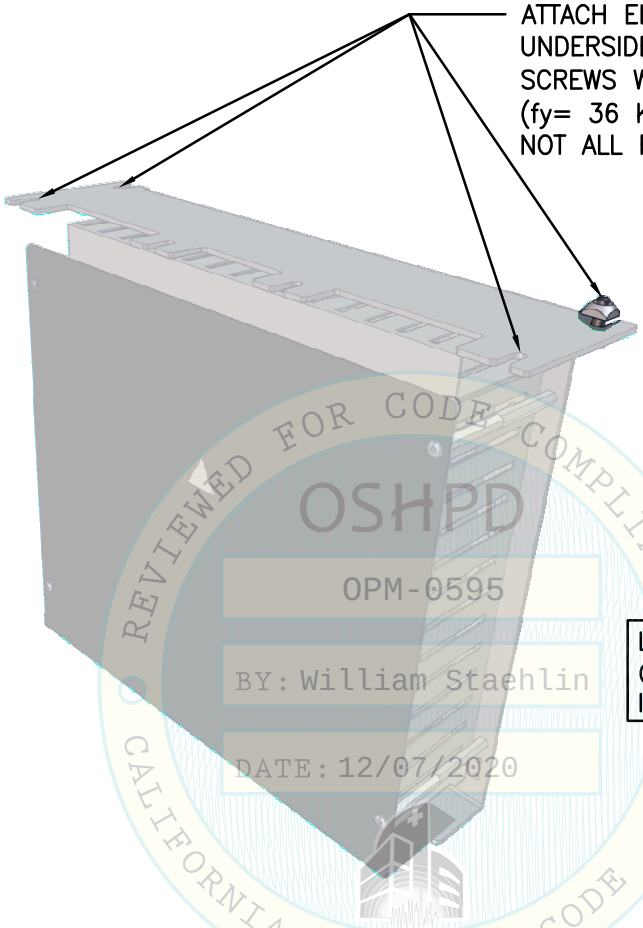
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



B ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 3: RE-CAPPER MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

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

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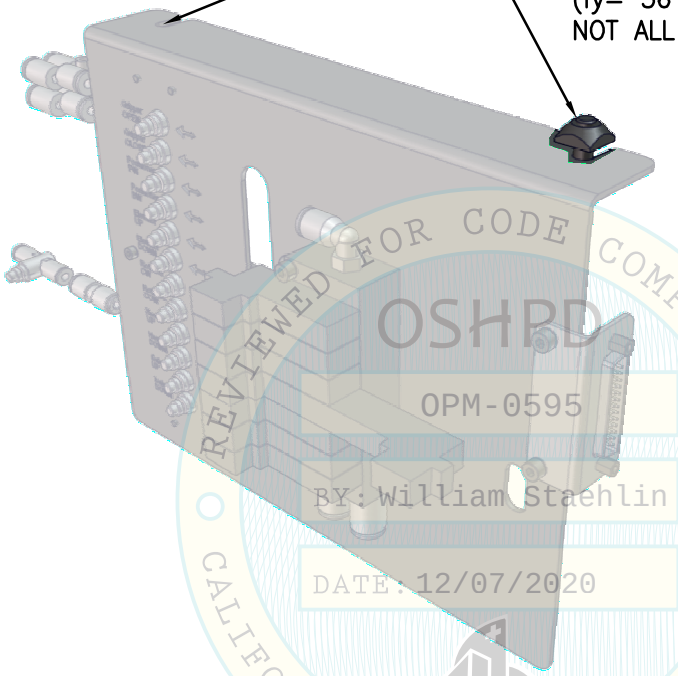
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



C PNEUMATIC PANEL ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 3: RE-CAPPER MODULE
PNEUMATIC PANEL ATTACHMENT

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

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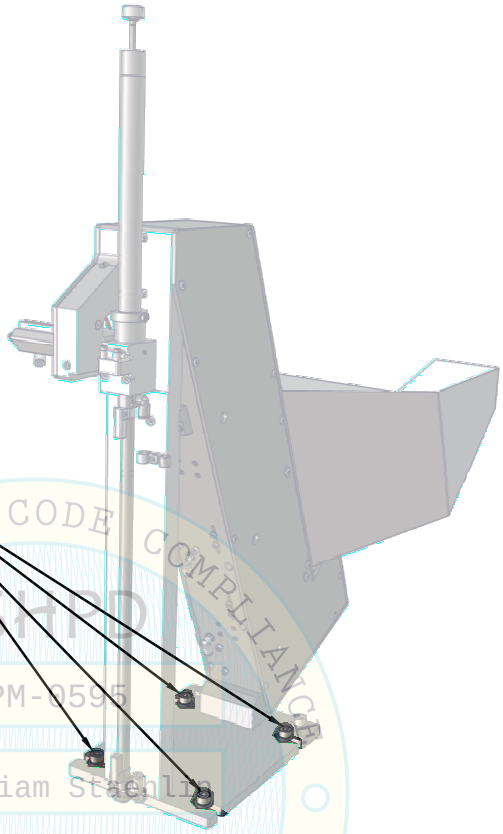
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH RE-CAPPER SWITCH CAP GROUP TO BOTT RAIL W/ 4- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)



D RE-CAPPER SWITCH CAP ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 3: RE-CAPPER MODULE
RE-CAPPER SWITCH CAP GROUP ATTACHMENT

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

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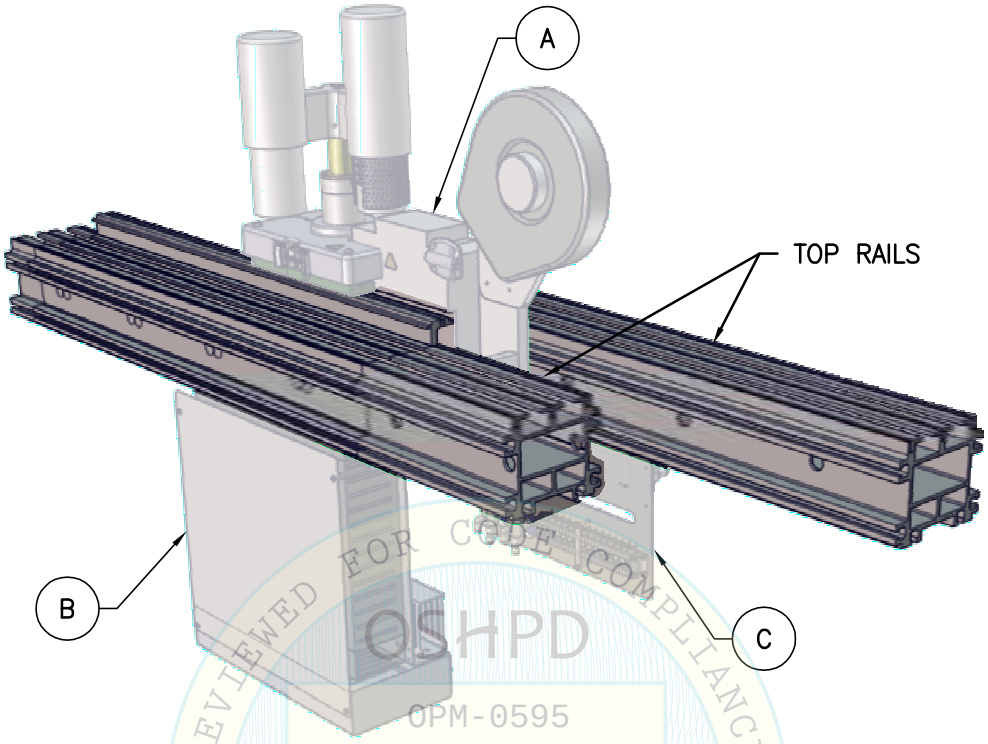
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



TRACK SUPPORT FRAMES & BOTT RAIL NOT SHOWN FOR CLARITY. SEE PGS 16–18

LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ITEM	SUB–ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB–ASSEMBLY ATTACHMENT DTL PG
A	SEALER ASSEMBLY	23	35
B	ELECTRICAL CONTROL PANEL	11	36
C	PNEUMATIC PANEL	5	37
MISC	MODULE SAMPLING, COVERS, WIRES, TUBES, ETC.	30	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	165	16–18
	TOTAL WEIGHT	234	

*COMPONENT SUB–ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 4: SEALER MODULE

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

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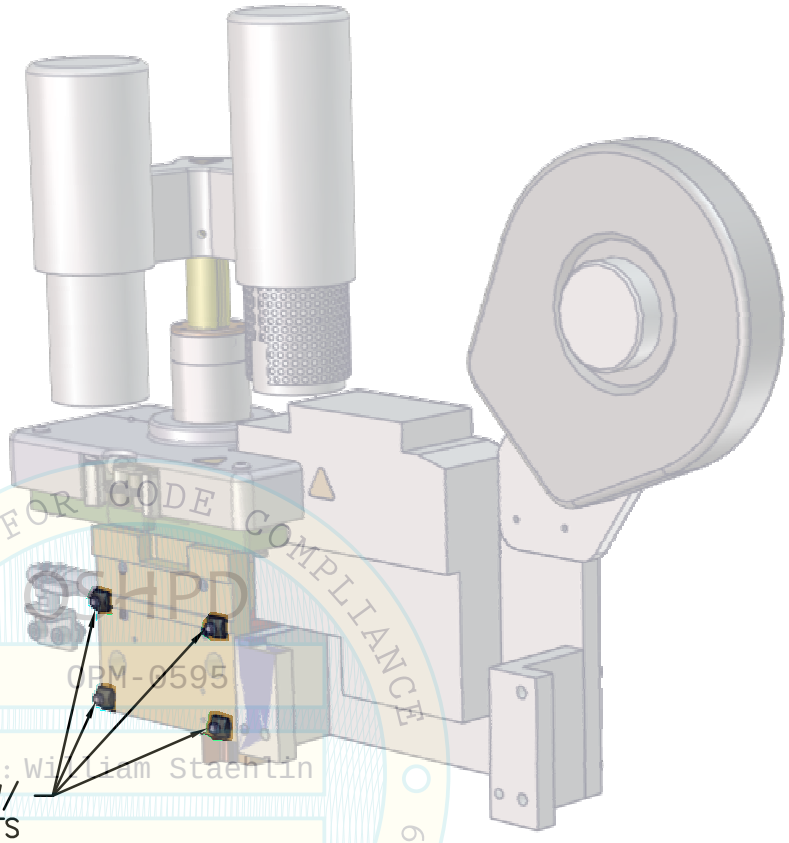
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH SEALER ASSEMBLY TO TOP RAIL W/ 4- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

A SEALER ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 4: SEALER MODULE
SEALER ASSEMBLY ATTACHMENT

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

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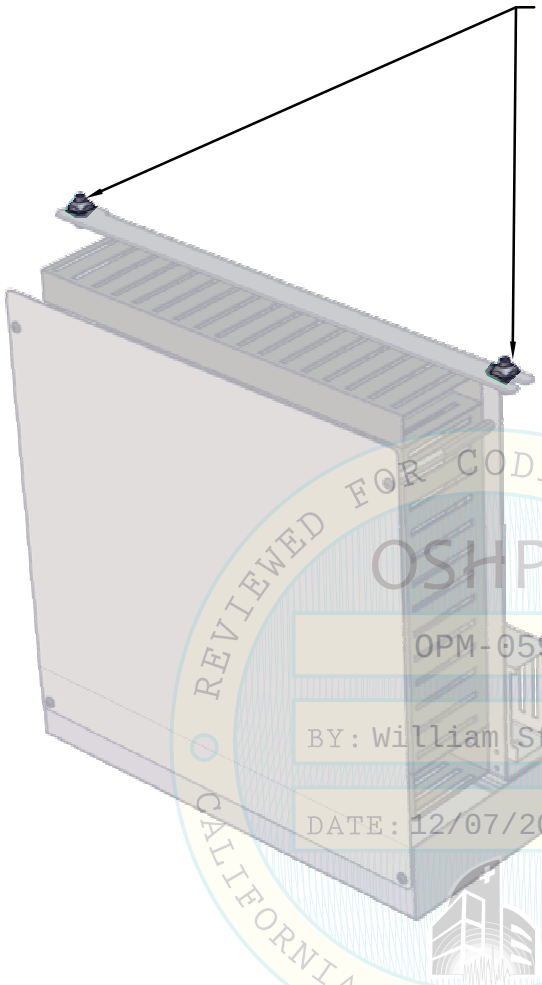
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



B ELECTRIC CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 4: SEALER MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

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

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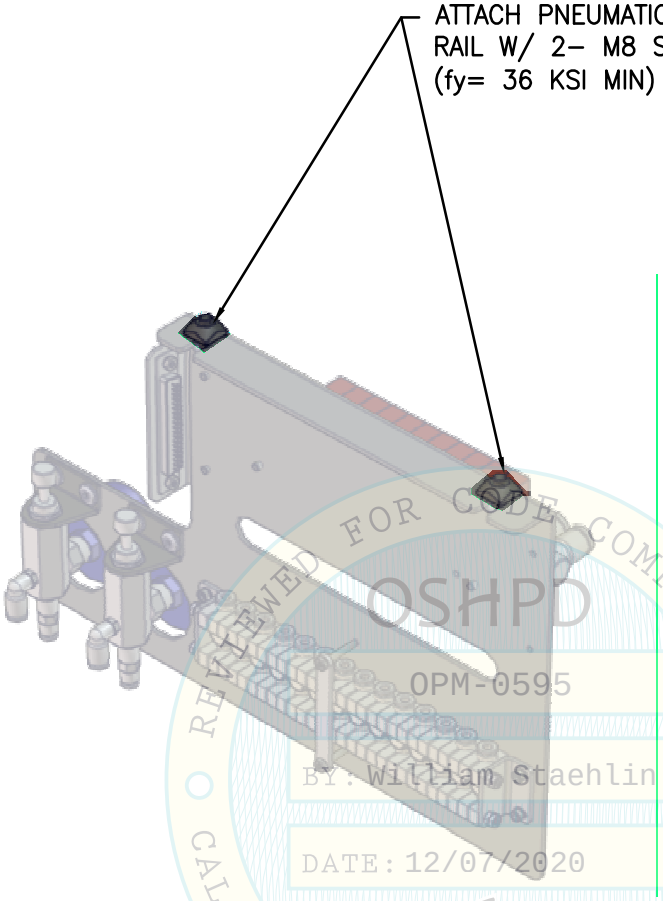
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



C PNEUMATIC PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 4: SEALER MODULE
PNEUMATIC PANEL ATTACHMENT

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

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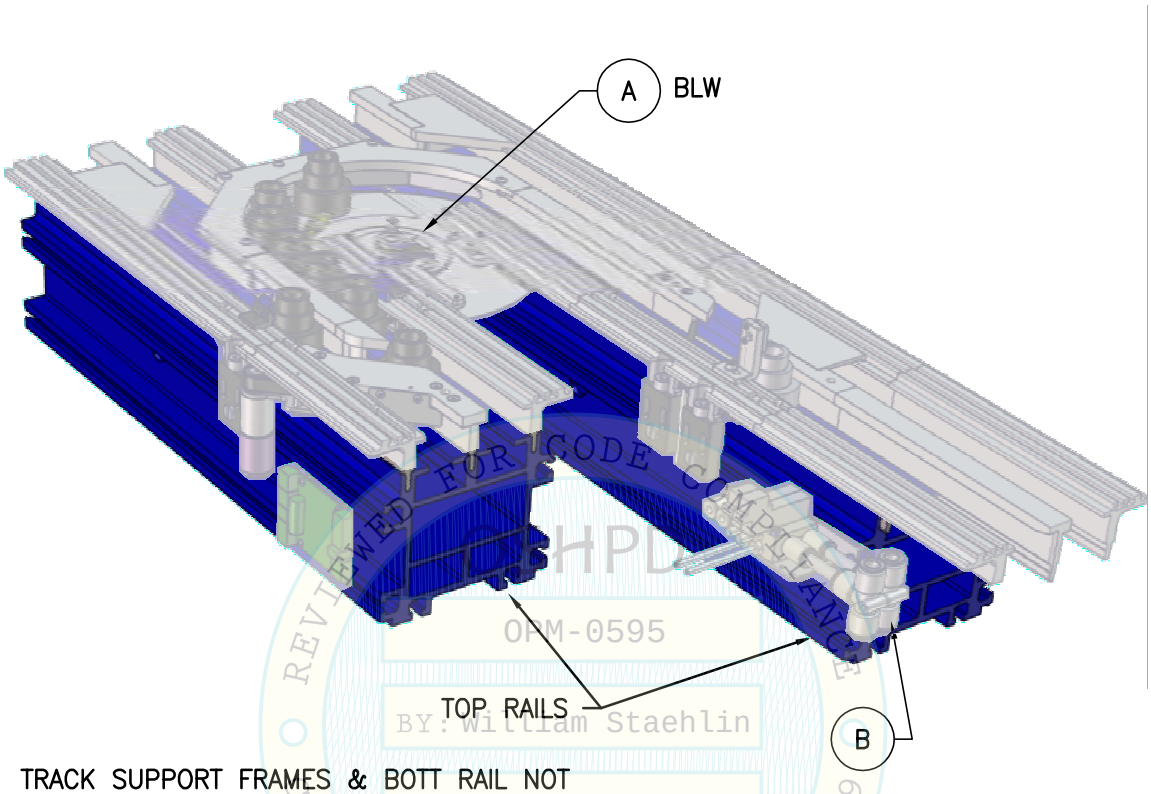
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



TRACK SUPPORT FRAMES & BOTT RAIL NOT SHOWN FOR CLARITY. SEE PGS 16–18

ITEM	SUB–ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB–ASSEMBLY ATTACHMENT DTL PG
A	BYPASS DISK MOTOR	10	39
B	SOLENOID VALVES GROUP	5	40
C	ELECTRICAL CONTROL PANEL (NOT SHOWN)	11	41
MISC	BYPASS TRACK, COVERS, SENSORS, ETC.	31	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	165	16–18
	TOTAL WEIGHT	222	

*COMPONENT SUB–ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 17: U-TURN MODULE

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

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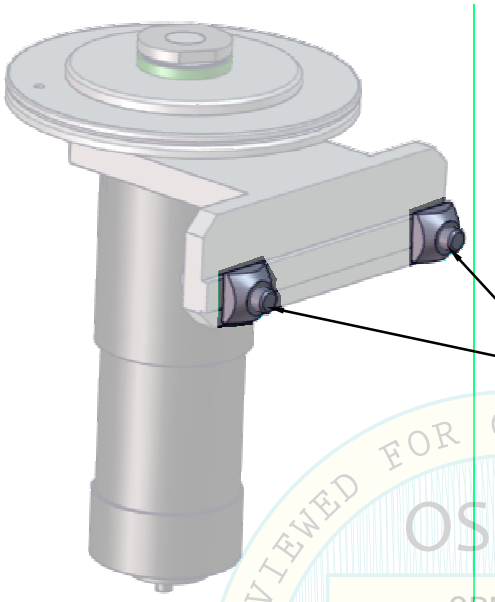
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH BYPASS DISK MOTOR TO TOP RAIL W/ 2- M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

A BYPASS DISK MOTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 17: U-TURN MODULE
BYPASS DISK MOTOR ATTACHMENT

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

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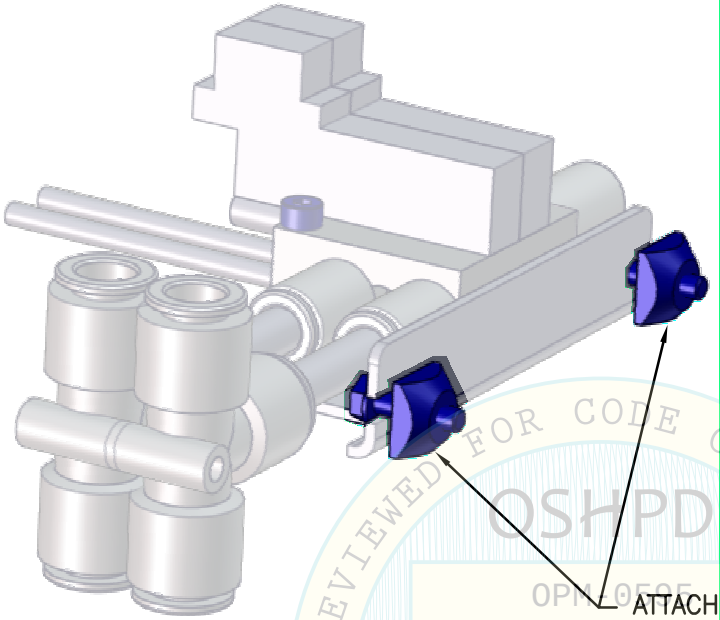
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH SOLENOID VALVES GROUP TO SIDE OF TOP RAIL W/ 2– M8 SCREWS W/ SPRING NUTS (fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

B SOLENOID VALVES GROUP

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

NOT SEOR

SHEET TITLE: COMPONENT 17: U-TURN MODULE
SOLENOID VALVES GROUP ATTACHMENT

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

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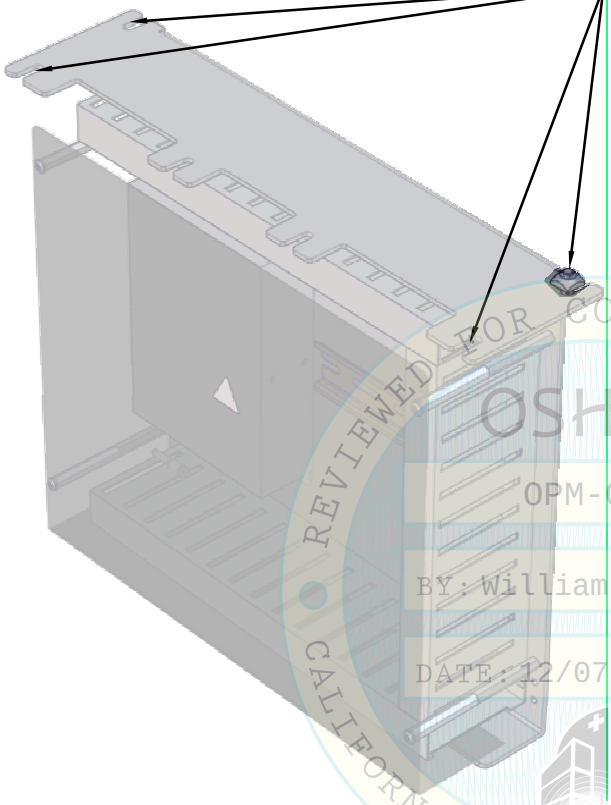
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ATTACH ELECTRICAL CONTROL PANEL TO UNDERSIDE OF TOP RAIL W/ 4– M8 SCREWS W/ SPRING NUTS
(fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)
NOT ALL FASTENERS SHOWN FOR CLARITY

LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

C ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 17: U-TURN MODULE
ELECTRICAL CONTROL PANEL ATTACMENT

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

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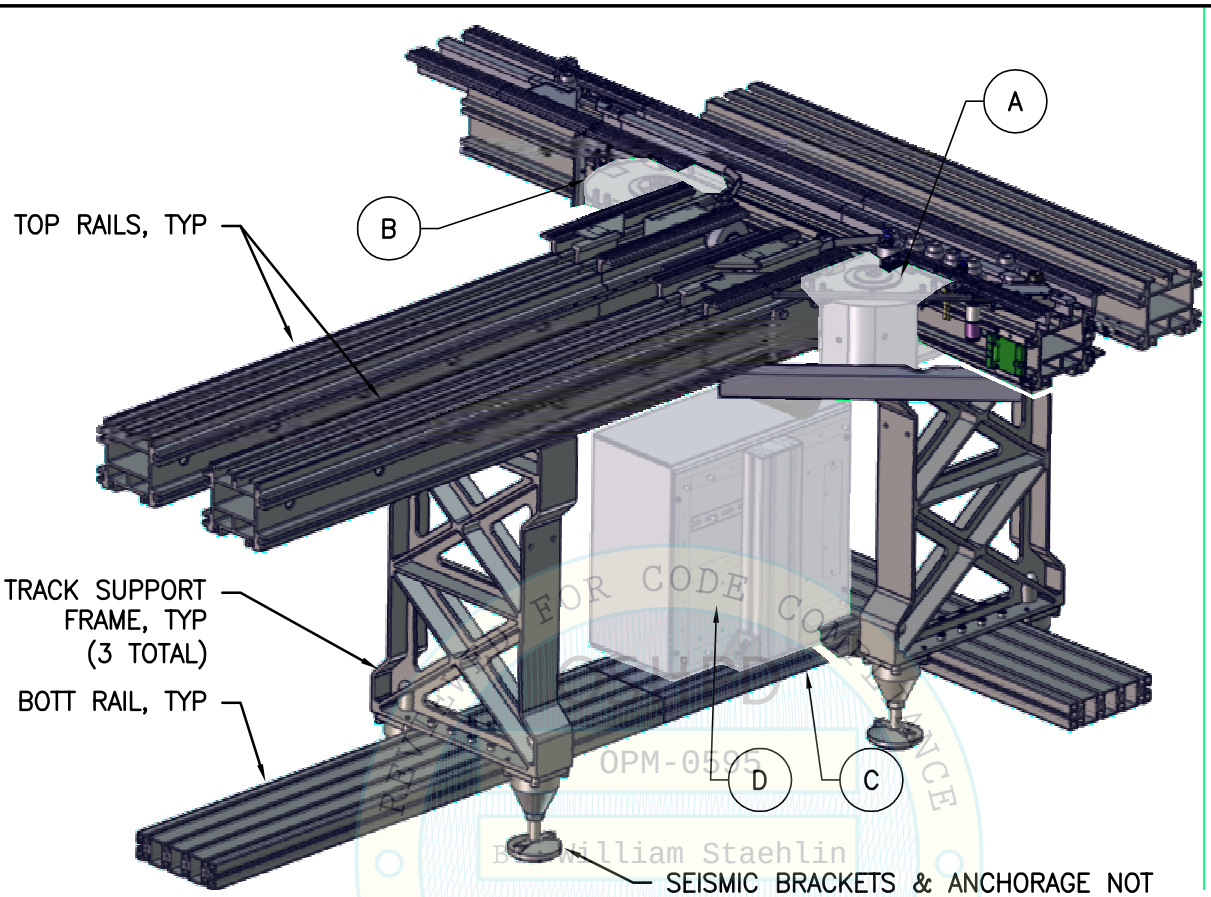
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ITEM	SUB-ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB-ASSEMBLY ATTACHMENT DTL PG
A	RIGHT DISK ASSEMBLY	20	43
B	LEFT DISK ASSEMBLY	20	44
C	LOWER TRACK ASSEMBLY	20	45
D	ELECTRICAL CONTROL PANEL	20	46
MISC	DIVERSION LANES, COVERS, WIRES, ETC.	30	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	330	16-18 SIM
	TOTAL WEIGHT	440	

*COMPONENT SUB-ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE

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

Job No:	20064
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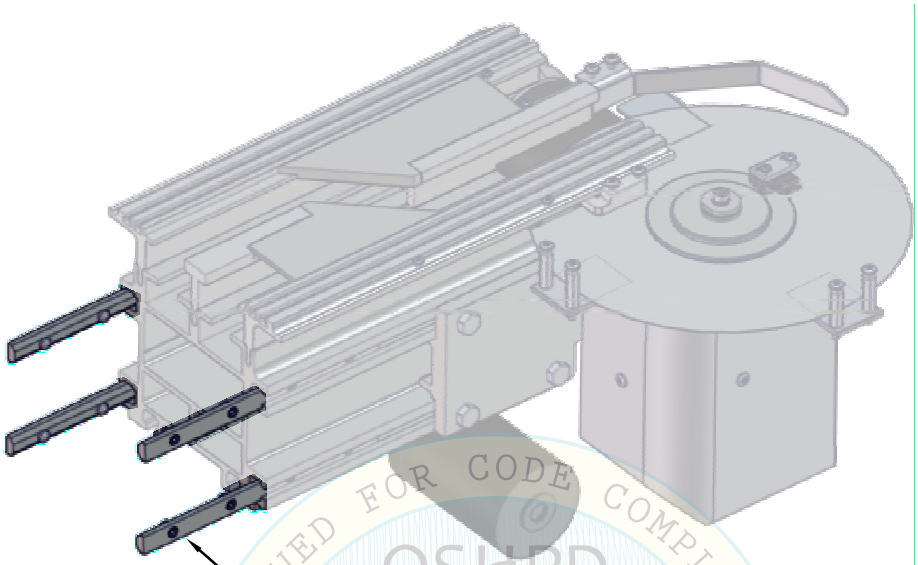
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ATTACH RIGHT DISK ASSEMBLY TO TOP RAIL W/ 6– CONNECTOR PLATES (NOT ALL SHOWN). SEE TOP RAIL SPLICE DTL ON PG 18 FOR ADDNL INFO. (ATTACHMENT BY ABBOTT)

A RIGHT DISK ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
RIGHT DISK ASSEMBLY ATTACHMENT

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

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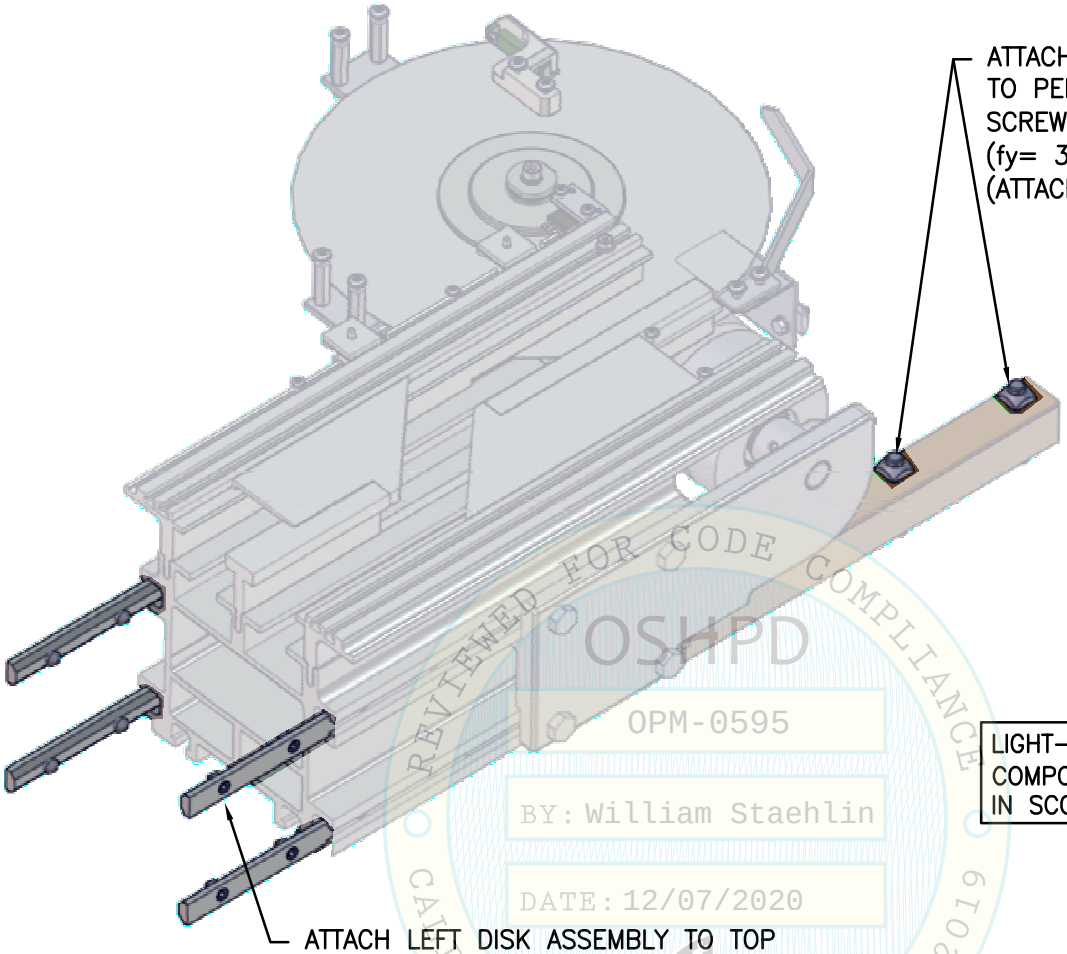
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



B LEFT DISK ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
LEFT DISK ASSEMBLY ATTACHMENT

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

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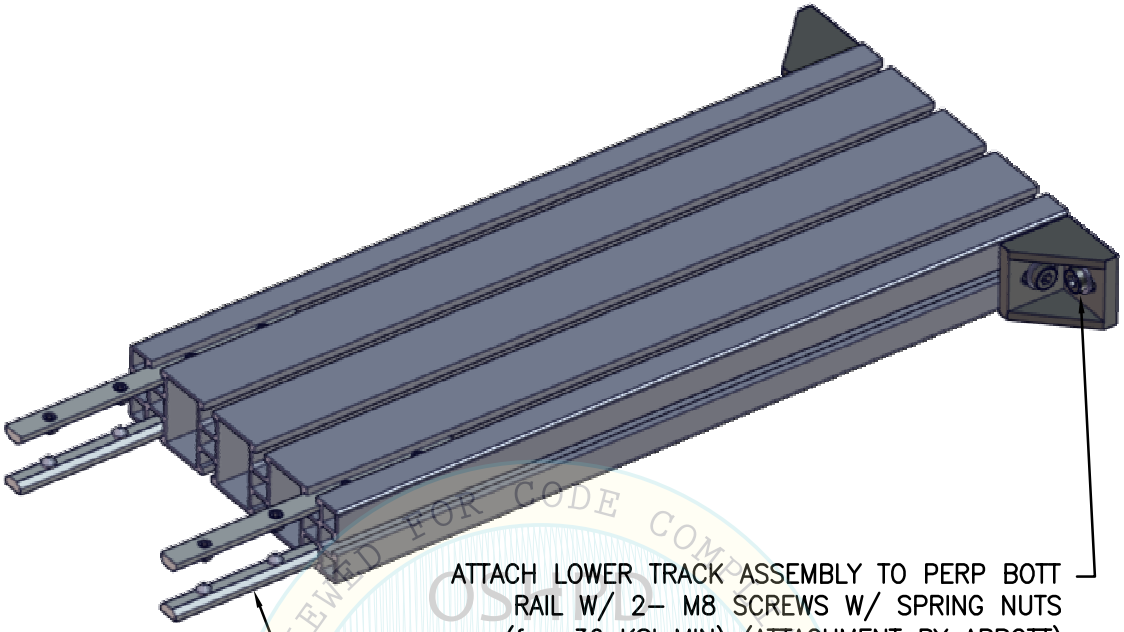
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



C LOWER TRACK ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
LOWER TRACK ASSEMBLY ATTACHMENT

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

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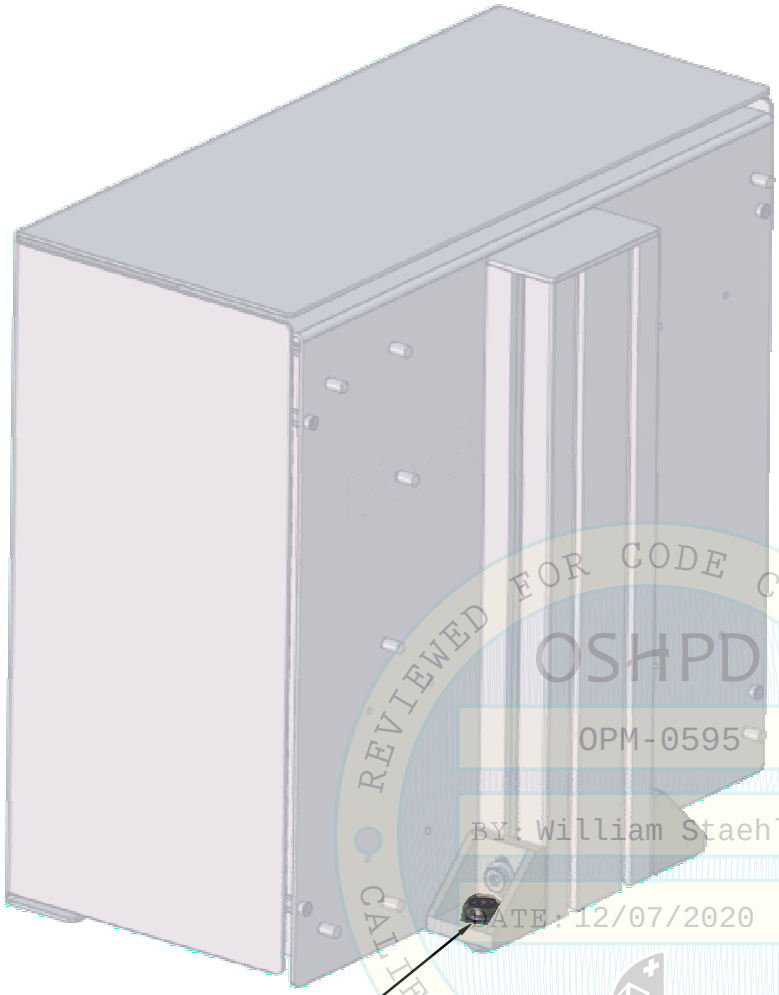
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



LIGHT-TONED COMPONENT(S) NOT IN SCOPE OF WORK.

ATTACH ELECTRICAL CONTROL PANEL TO LOWER TRACK ASSEMBLY W/ 2- M8 SCREWS W/ SPRING NUTS
(fy= 36 KSI MIN) (ATTACHMENT BY ABBOTT)

D ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

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

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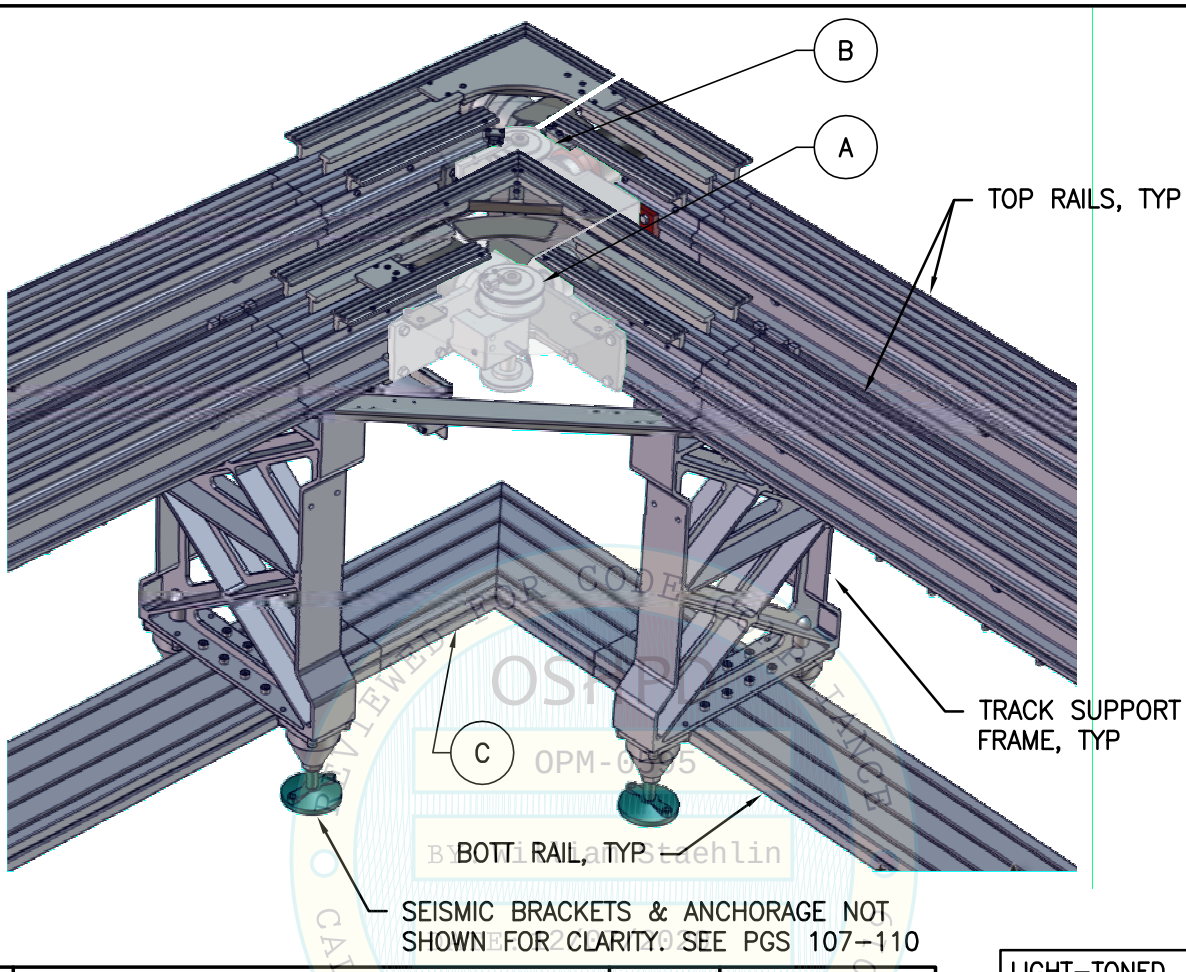
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ITEM	SUB–ASSEMBLY DESCRIPTION	WEIGHT Wp(LBS)	SUB–ASSEMBLY ATTACHMENT DTL PG
A	INTERNAL DISK ASSEMBLY	30	48
B	EXTERNAL DISK ASSEMBLY	30	49
C	LOWER TRACK ASSEMBLY	30	50
D	ELECTRICAL CONTROL PANEL (NOT SHOWN)	15	51
MISC	BUFFER LANES, COVERS, WIRES, ETC.	32	N/A
TRACK	SUPPORT FRAMES, T&B RAILS, ETC.	165	16–18 SIM
	TOTAL WEIGHT	302	

*COMPONENT SUB–ASSEMBLY ATTACHMENTS SHALL BE PERFORMED BY ABBOTT, NOT BY THE GENERAL CONTRACTOR

LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE

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

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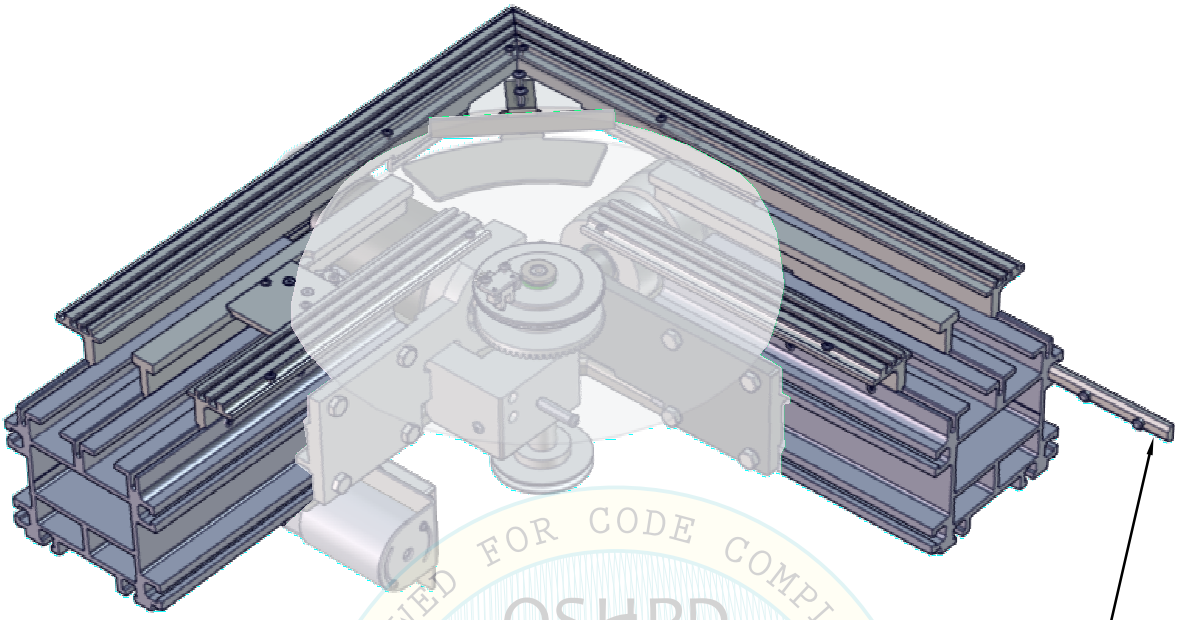
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ATTACH INTERNAL DISK ASSEMBLY TO TOP RAIL W/ 6– CONNECTOR PLATES EA END (NOT ALL SHOWN). SEE TOP RAIL SPLICE DTL ON PG 18 FOR ADDNL INFO. (ATTACHMENT BY ABBOTT)

LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

A INTERNAL DISK ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
INTERNAL DISK ASSEMBLY ATTACHMENT

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

Job No:	20064
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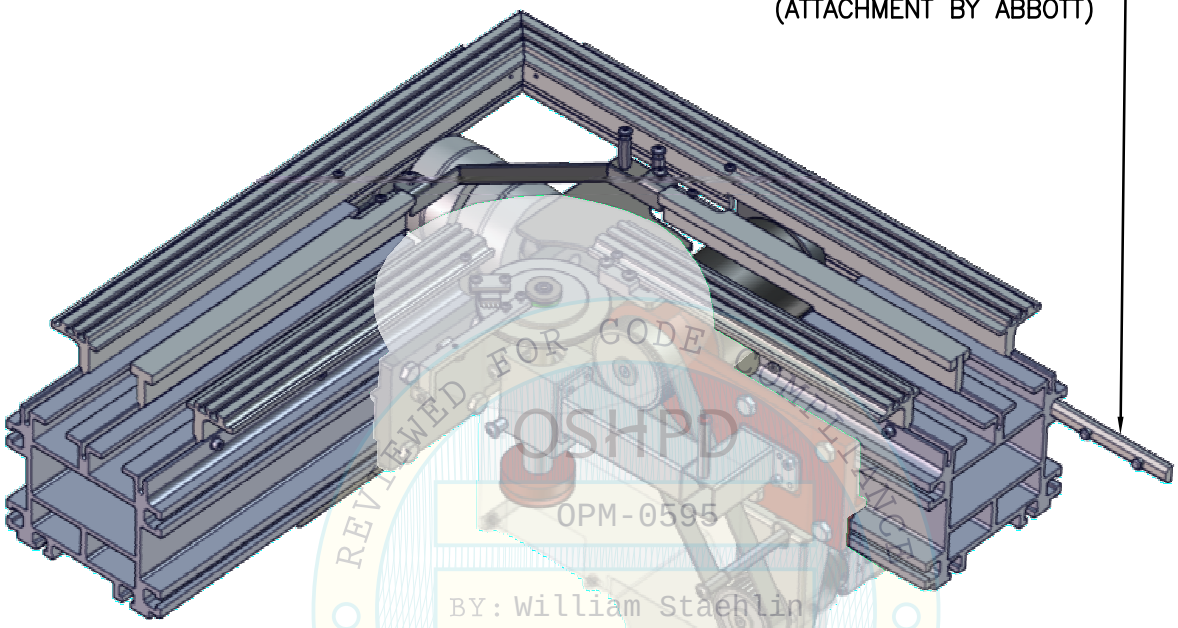
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

ATTACH EXTERNAL DISK ASSEMBLY TO TOP RAIL W/ 6– CONNECTOR PLATES EA END (NOT ALL SHOWN). SEE TOP RAIL SPLICE DTL ON PG 18 FOR ADDNL INFO. (ATTACHMENT BY ABBOTT)



LIGHT–TONED COMPONENT(S) NOT IN SCOPE OF WORK.

B EXTERNAL DISK ASSEMBLY

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
EXTERNAL DISK ASSEMBLY ATTACHMENT

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

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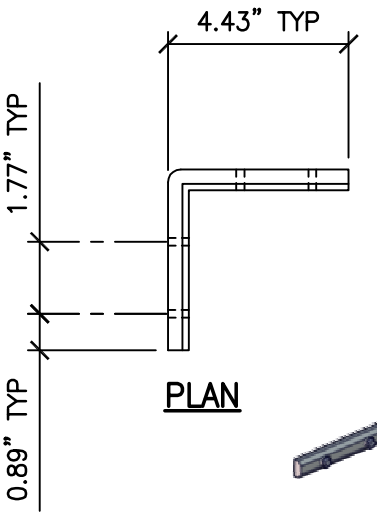
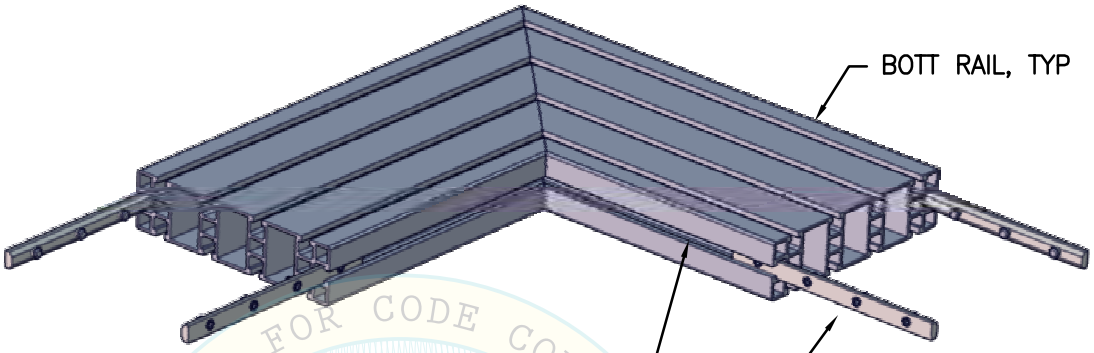


PLAN



ATTACH EA HALF OF LOWER TRACK ASSEMBLY W/ BENT L-CONNECTOR ES OF CORNER. FOR ATTACHMENT, SEE PG 18 SIM (ATTACHMENT BY ABBOTT)

ATTACH LOWER TRACK ASSEMBLY TO BOTT RAIL W/ 4- CONNECTOR PLATES EA END (NOT ALL SHOWN). SEE BOTT RAIL SPLICE DTL ON PG 18 FOR ADDNL INFO. (ATTACHMENT BY ABBOTT)

C LOWER TRACK ASSEMBLY

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
LOWER TRACK ASSEMBLY ATTACHMENT

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

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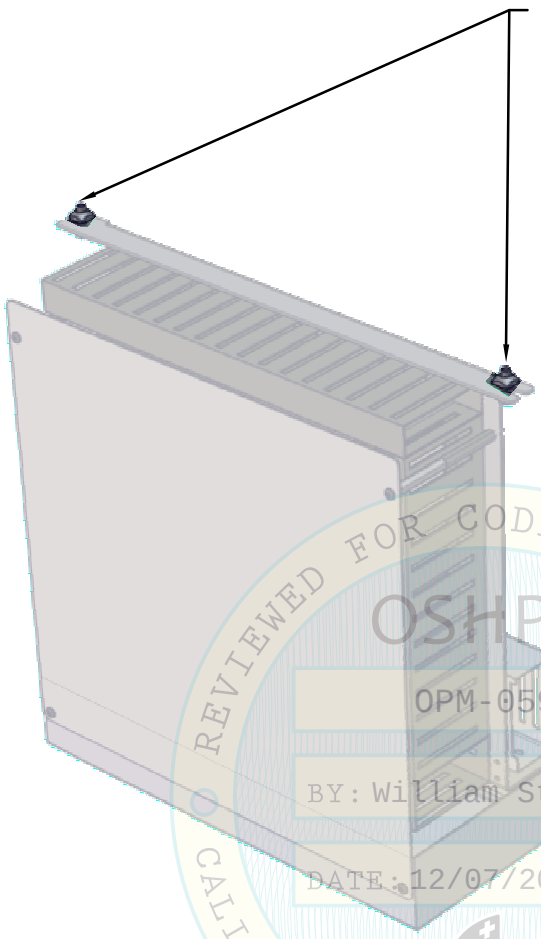
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



D ELECTRICAL CONTROL PANEL

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
ELECTRICAL CONTROL PANEL ATTACHMENT

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

Job No:	20064
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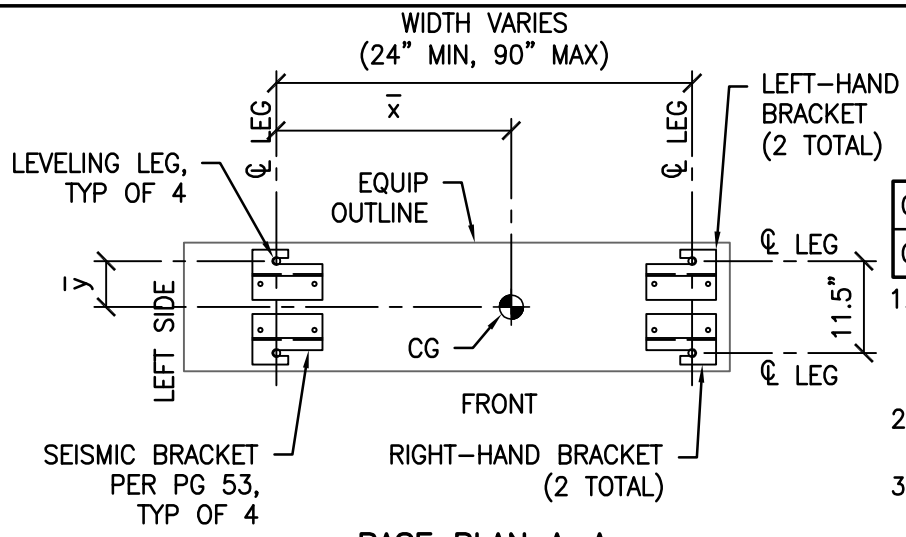
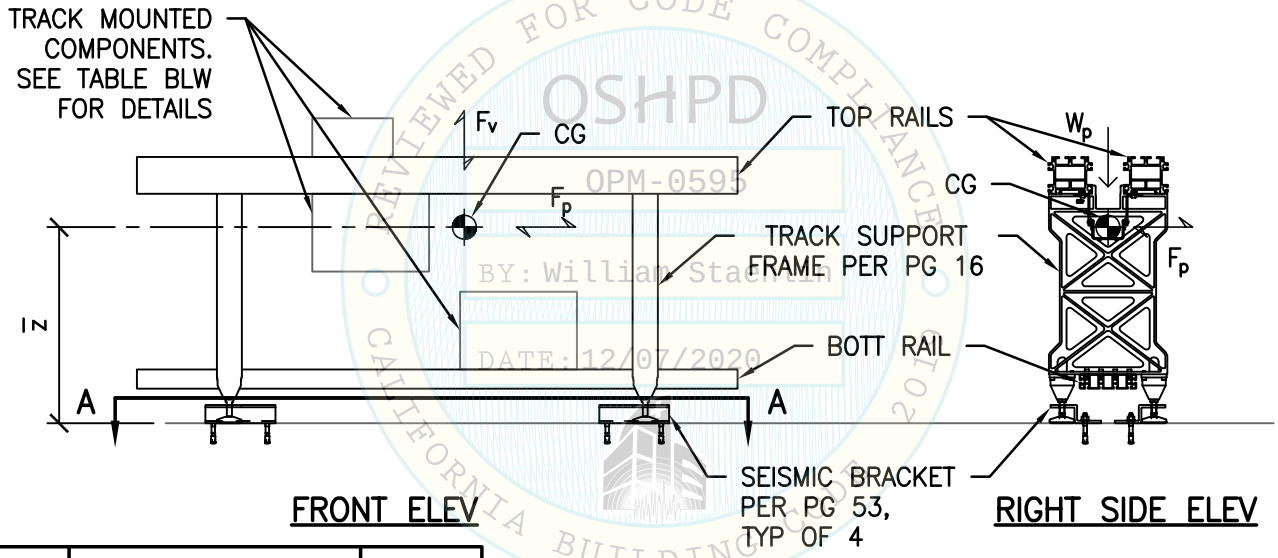
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	1362	1584#	508#
CASE 2 [2]	748#	969#	286#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

BASE PLAN A-A



FRONT ELEV

RIGHT SIDE ELEV

NO.	COMPONENT	DTL PG
N/A	TRACK SEGMENT	16
1	DE-SEALER MODULE	19-23
2	DE-CAPPER MODULE	24-28
3	RE-CAPPER MODULE	29-33
4	SEALER MODULE	34-37
17	U-TURN MODULE	38-41

NOTE:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PGS 10 & 11.
2. A DISTANCE OF 5.5" BTW AB OF ADJ BRACKETS IS ACCEPTABLE.

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE FOR COMPONENTS 1, 2, 3, 4 & 17:
BASE PLAN & ELEVATIONS

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

Job No:	20064
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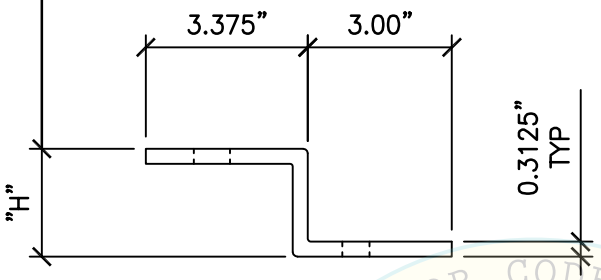
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

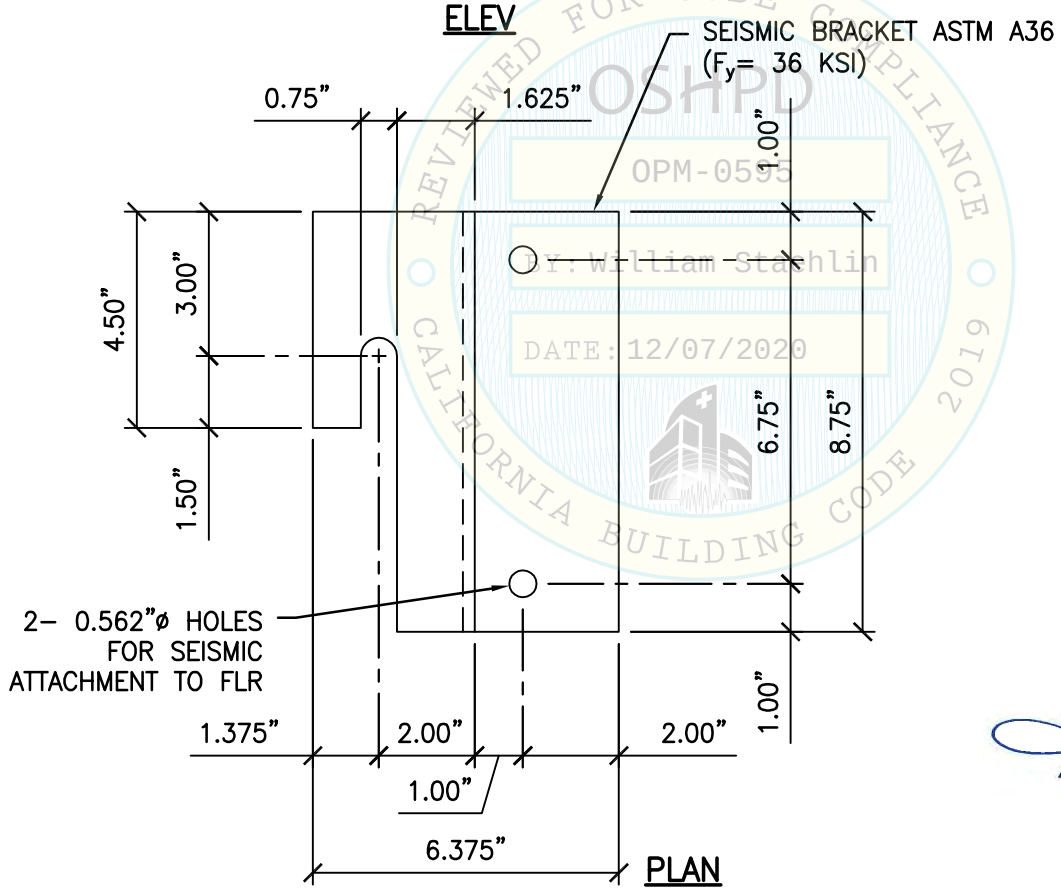
BRACKET A: "H" = 2.25" FOR 2.25" ≤ CLR ≤ 3.50"

BRACKET B: "H" = 3.50" FOR 3.50" ≤ CLR ≤ 4.75"

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 54 & 55.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 52.
3. LEFT-HAND BRACKET SHOWN. SEE BASE PLAN A-A ON PG 52 FOR RIGHT-HAND BRACKET CONFIGURATION.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



ELEV



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 888mm
B = 920mm

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE FOR COMPONENTS 1, 2, 3, 4 & 17
SEISMIC BRACKET 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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Date:	12/01/2020
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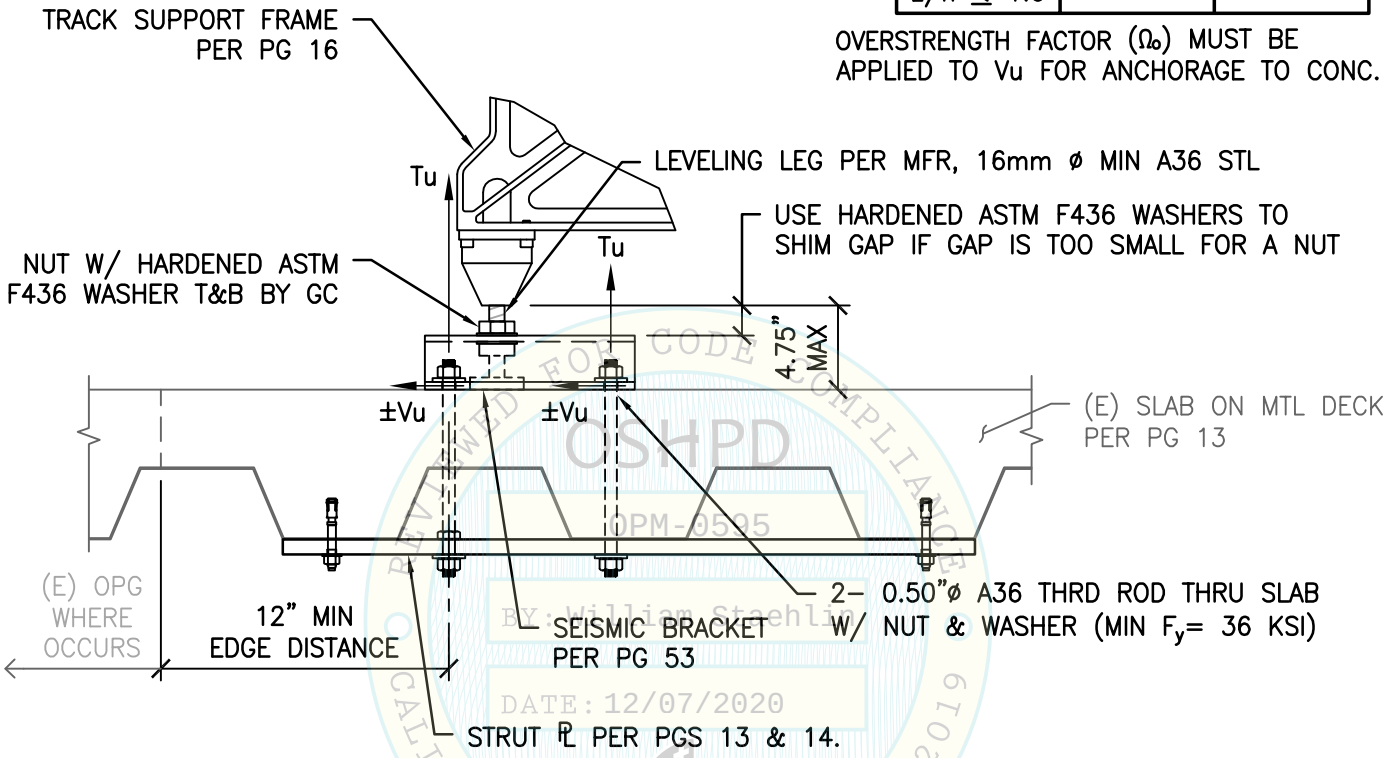
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2808#	364#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE FOR COMPONENTS 1, 2, 3, 4 & 17
SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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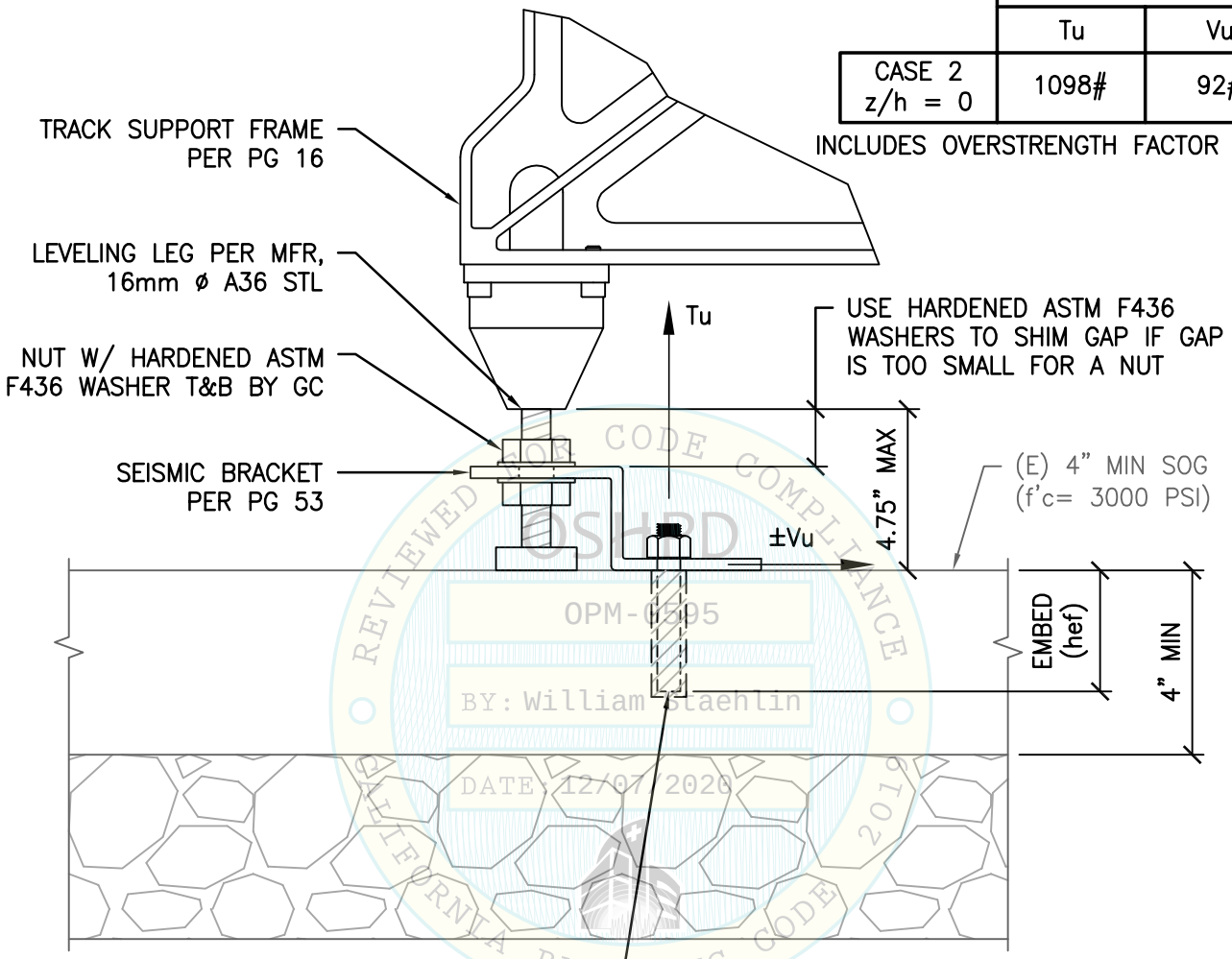
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1098#	92#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: TYPICAL TRACK MODULE FOR COMPONENTS 1, 2, 3, 4 & 17
SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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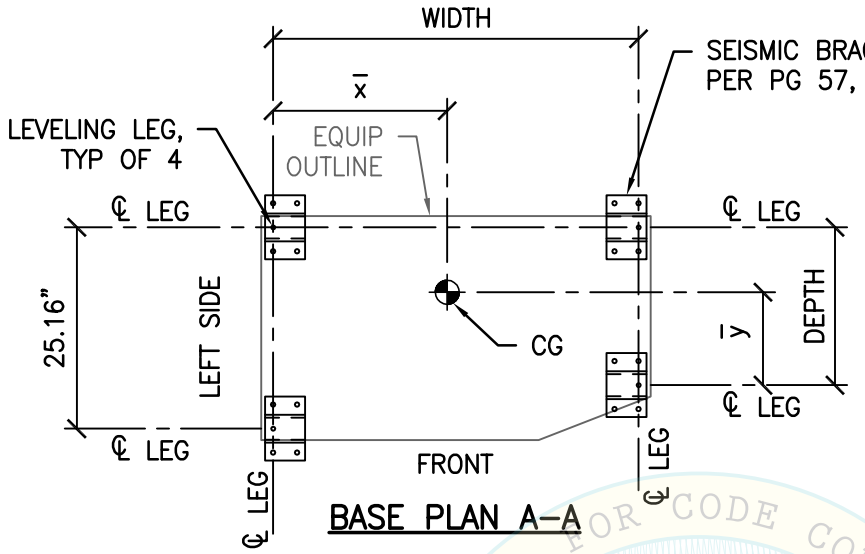
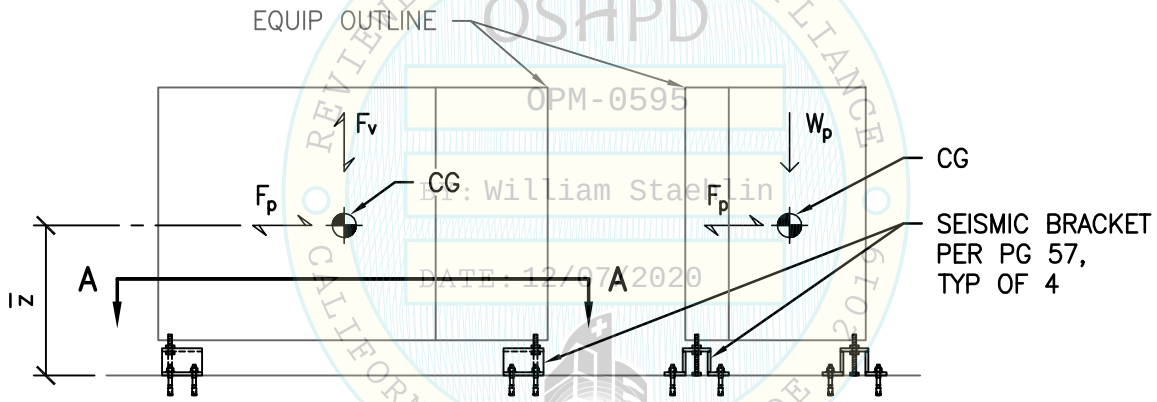
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	4125#	4858#	1029#
CASE 2 [2]	2259#	2992#	579#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

RIGHT SIDE ELEV

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 10.
2. THIS INSTRUMENT MAY BE INSTALLED ADJ TO A i1000sr ANALYZER. IF SO, THE DISTANCE BTW AB'S MAY BE REDUCED TO 5.0625". THIS CONDITION IS NOT SHOWN.

NOT SEOR

SHEET TITLE: COMPONENT 5: ARCHITECT c4000 ANALYZER
BASE PLAN & ELEVATIONS

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

Job No:	20064
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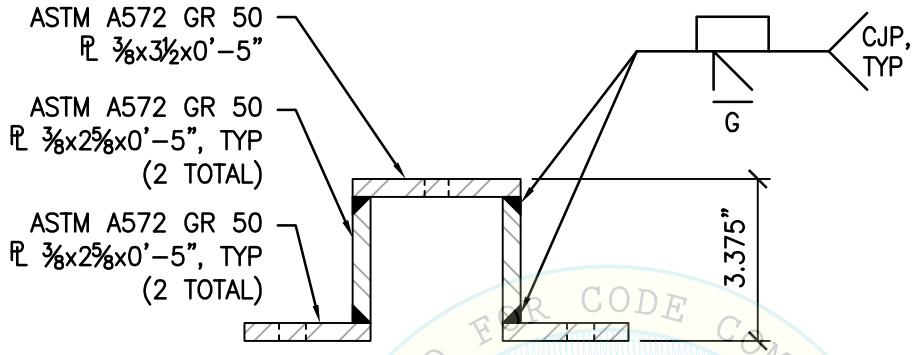
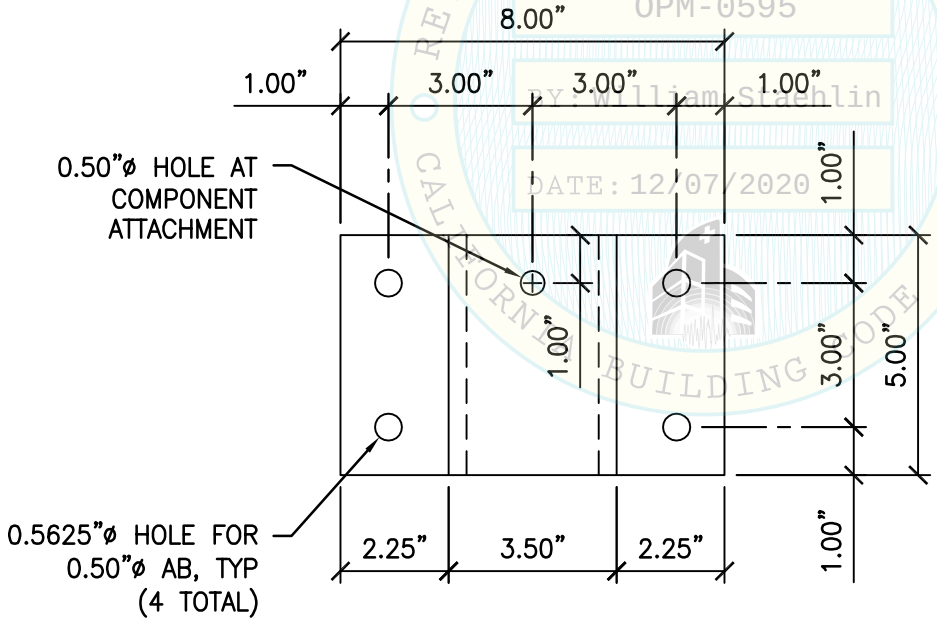
NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 58 & 59.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 56.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



ELEV



PLAN

NOT SEOR

SHEET TITLE: COMPONENT 5: ARCHITECT c4000 ANALYZER 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:	20064
Date:	12/01/2020
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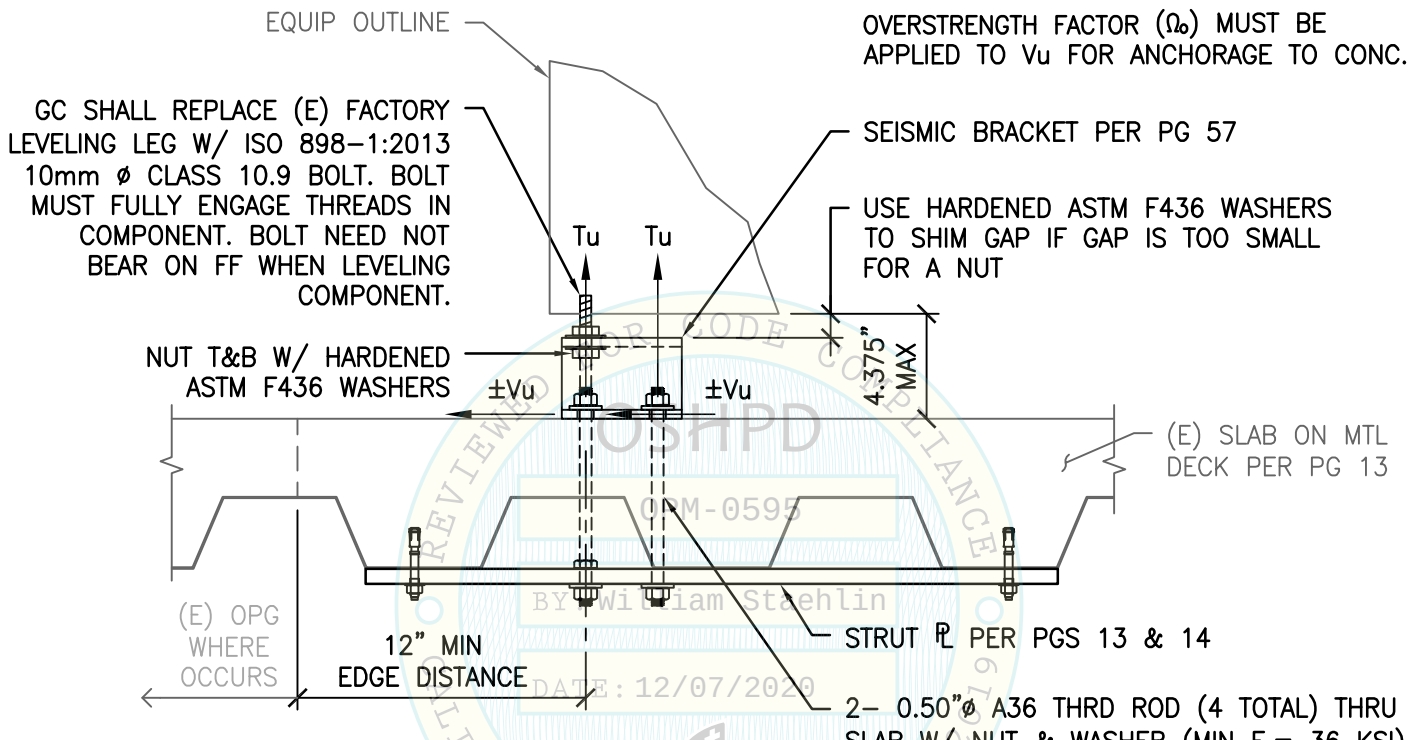
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2117#	311#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 5: ARCHITECT c4000 ANALYZER SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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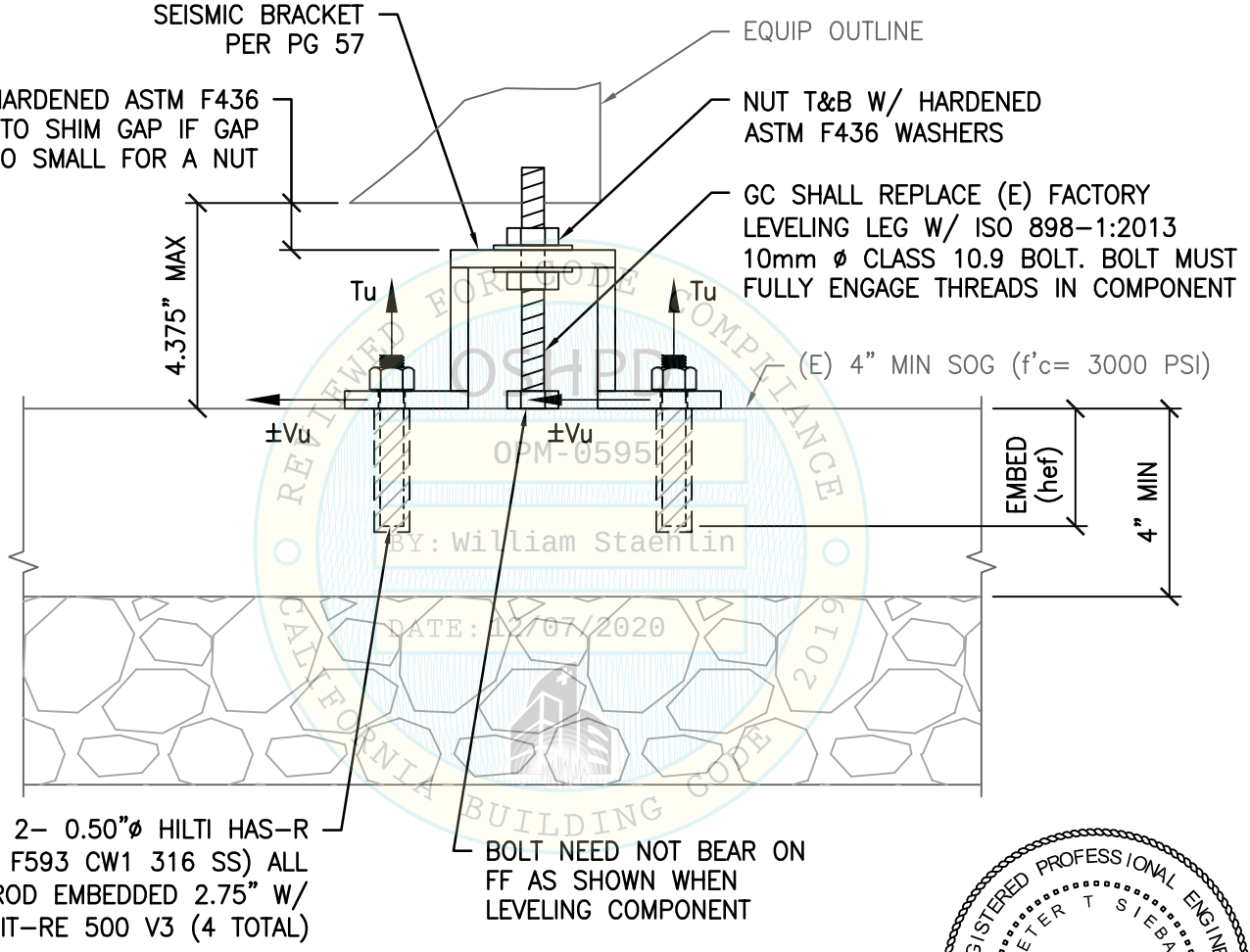
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1116#	175#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 5: ARCHITECT c4000 ANALYZER SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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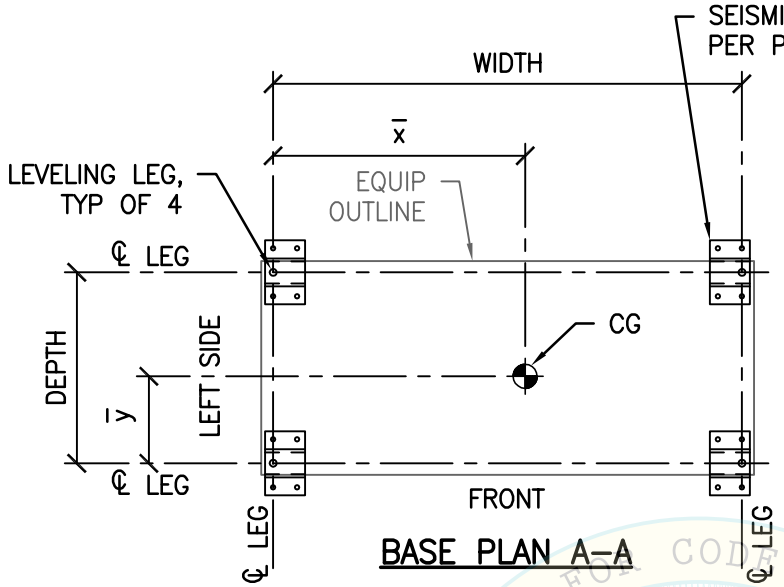
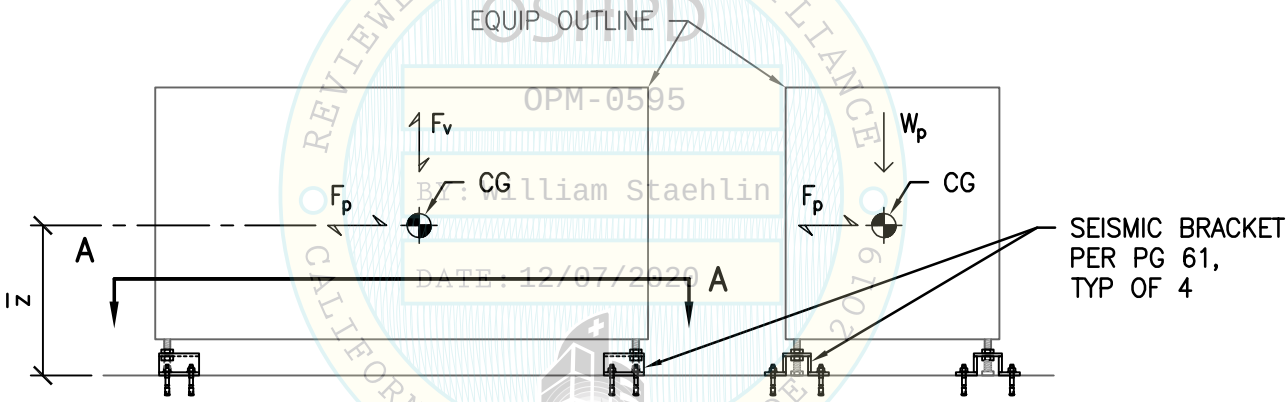
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	4058#	4933#	1207#
CASE 2 [2]	2209#	3085#	679#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

RIGHT SIDE ELEV

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 10.
2. THIS INSTRUMENT MAY BE INSTALLED ADJ TO A i2000sr ANALYZER. IF SO, THE DISTANCE BTW AB'S MAY BE REDUCED TO 5.0625". THIS CONDITION IS NOT SHOWN.

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

NOT SEOR

SHEET TITLE: COMPONENT 6: ARCHITECT c8000 ANALYZER
BASE PLAN & ELEVATIONS

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

Job No:	20064
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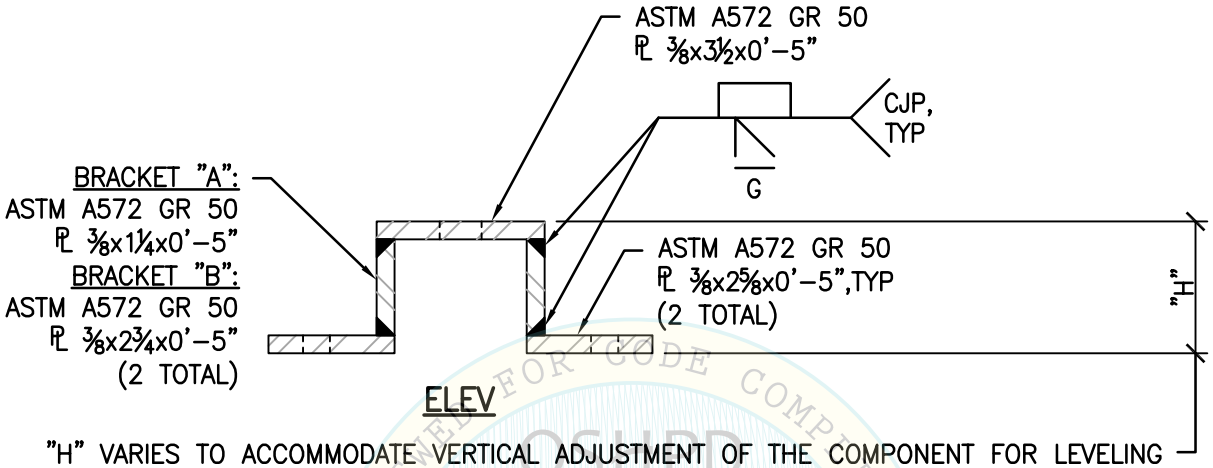
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 62 & 63.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 60.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

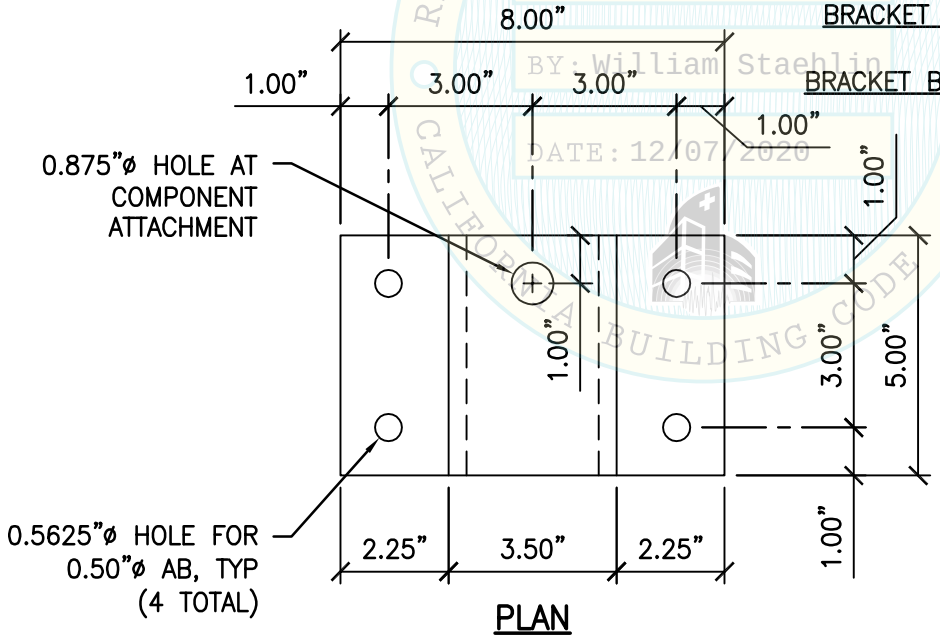


ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 2.00" FOR 2.00" ≤ CLR ≤ 3.75"

BRACKET B: "H" = 3.50" FOR 3.50" ≤ CLR ≤ 5.25"



PLAN

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 895mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 6: ARCHITECT c8000 ANALYZER SEISMIC BRACKET 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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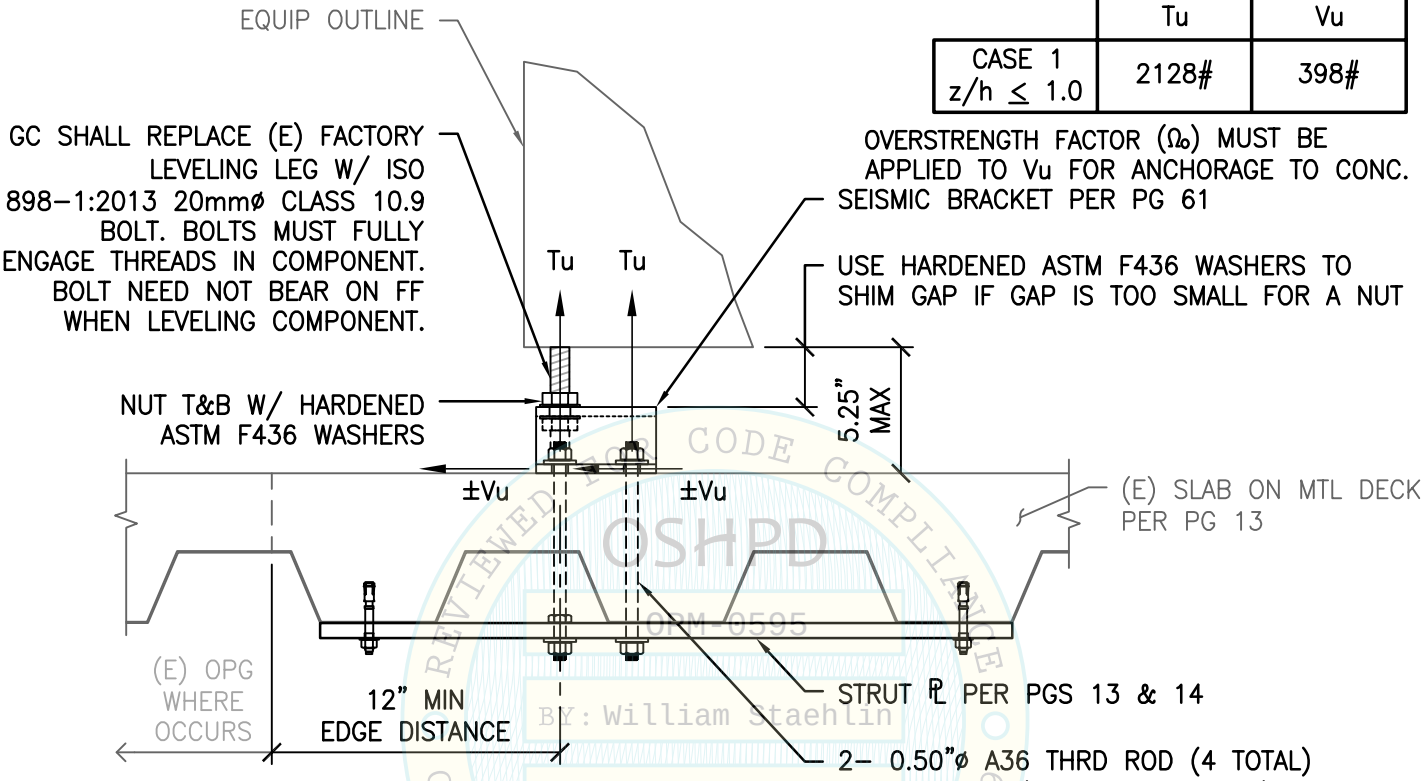
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	2128#	398#



CASE 1 - SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 6: ARCHITECT c8000 ANALYZER SUPPORTS & ATTACHMENTS 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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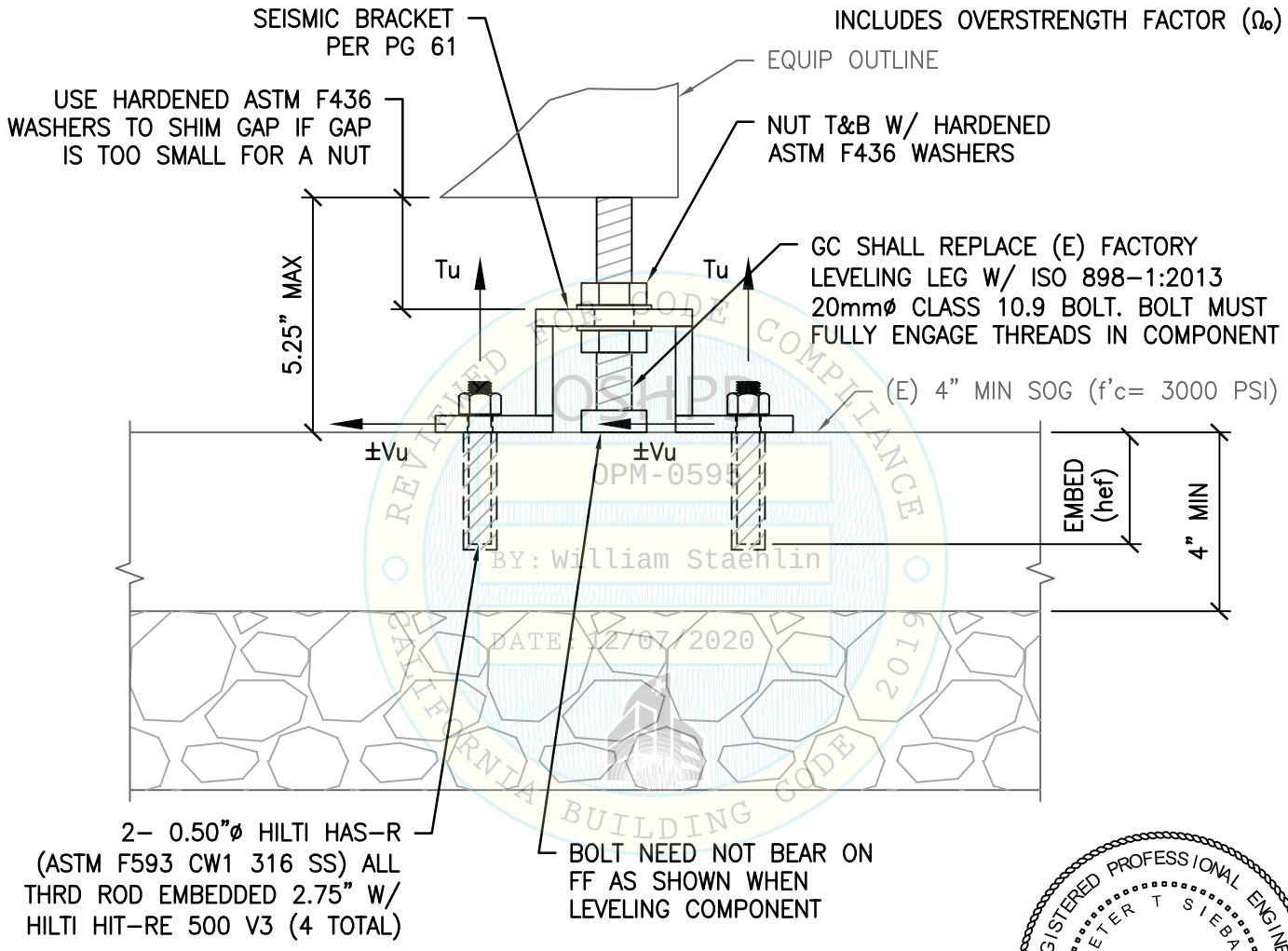
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1165#	224#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

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

NOT SEOR

SHEET TITLE: COMPONENT 6: ARCHITECT c8000 ANALYZER SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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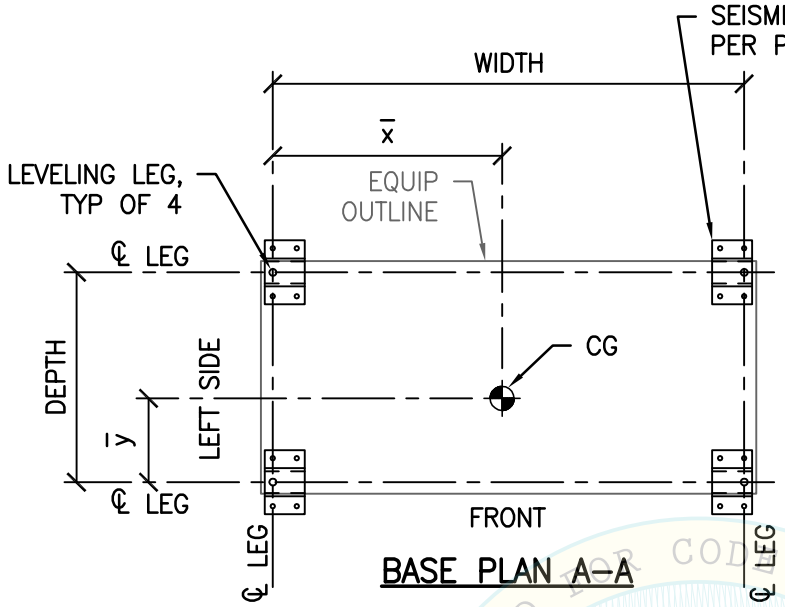
C:\Users\camachom\appdata\local\temp\AcPublish_1280\S1.dwg Time:Nov30,2020-11:34am Login:camachom Dimscale:1 LTScale:6

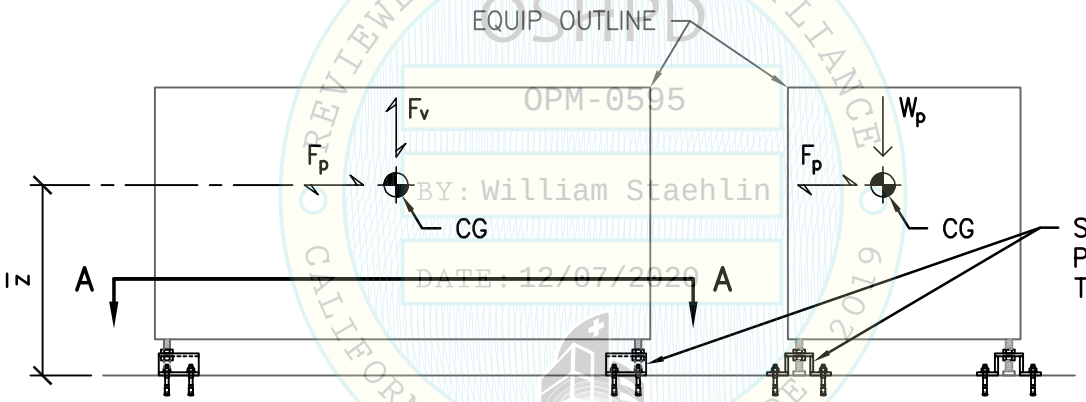
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	4229#	5163#	1341#
CASE 2 [2]	2301#	3235#	755#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



FRONT ELEV

RIGHT SIDE ELEV

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 10.
2. THIS INSTRUMENT MAY BE INSTALLED ADJ TO A i2000sr ANALYZER. IF SO, THE DISTANCE BTW AB'S MAY BE REDUCED TO 5.0625". THIS CONDITION IS NOT SHOWN.

NOT SEOR

SHEET TITLE: COMPONENT 7: ARCHITECT c16000 ANALYZER
BASE PLAN & ELEVATIONS

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

Job No:	20064
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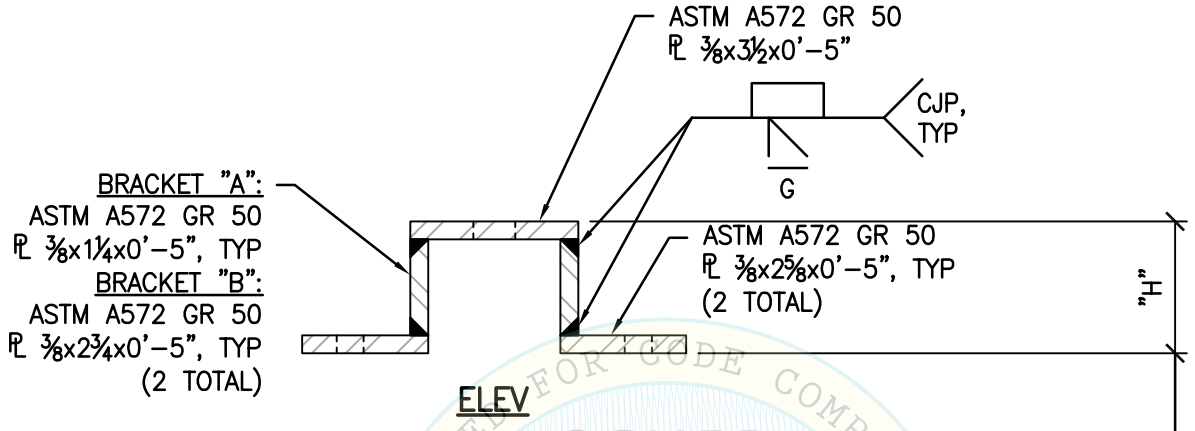
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

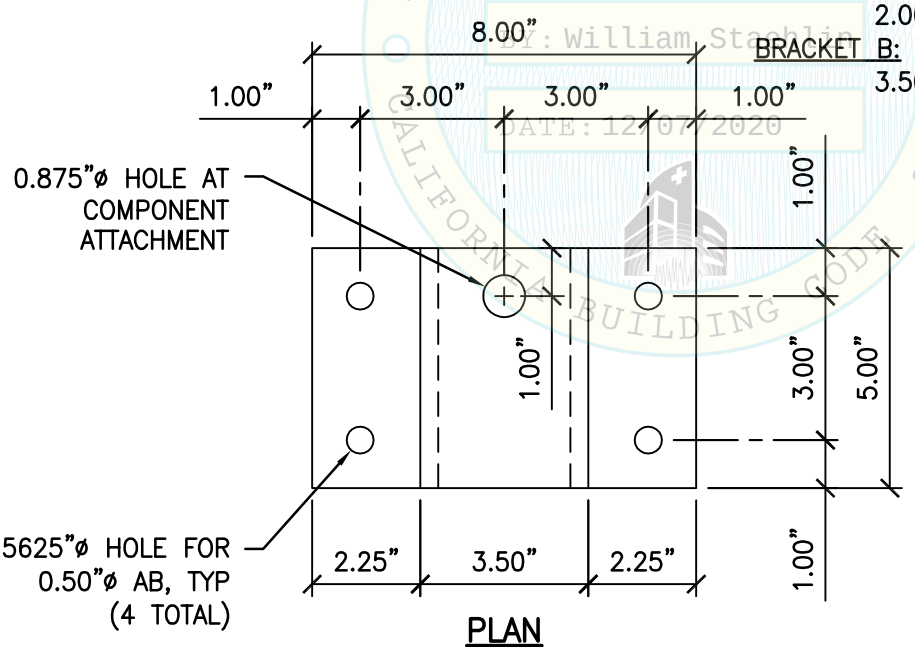
NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 66 & 67.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 64.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 2.00" FOR 2.00" ≤ CLR ≤ 3.75"
BRACKET B: "H" = 3.50" FOR 3.50" ≤ CLR ≤ 5.25"



PLAN

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 895mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 7: ARCHITECT c16000 ANALYZER 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:	20064
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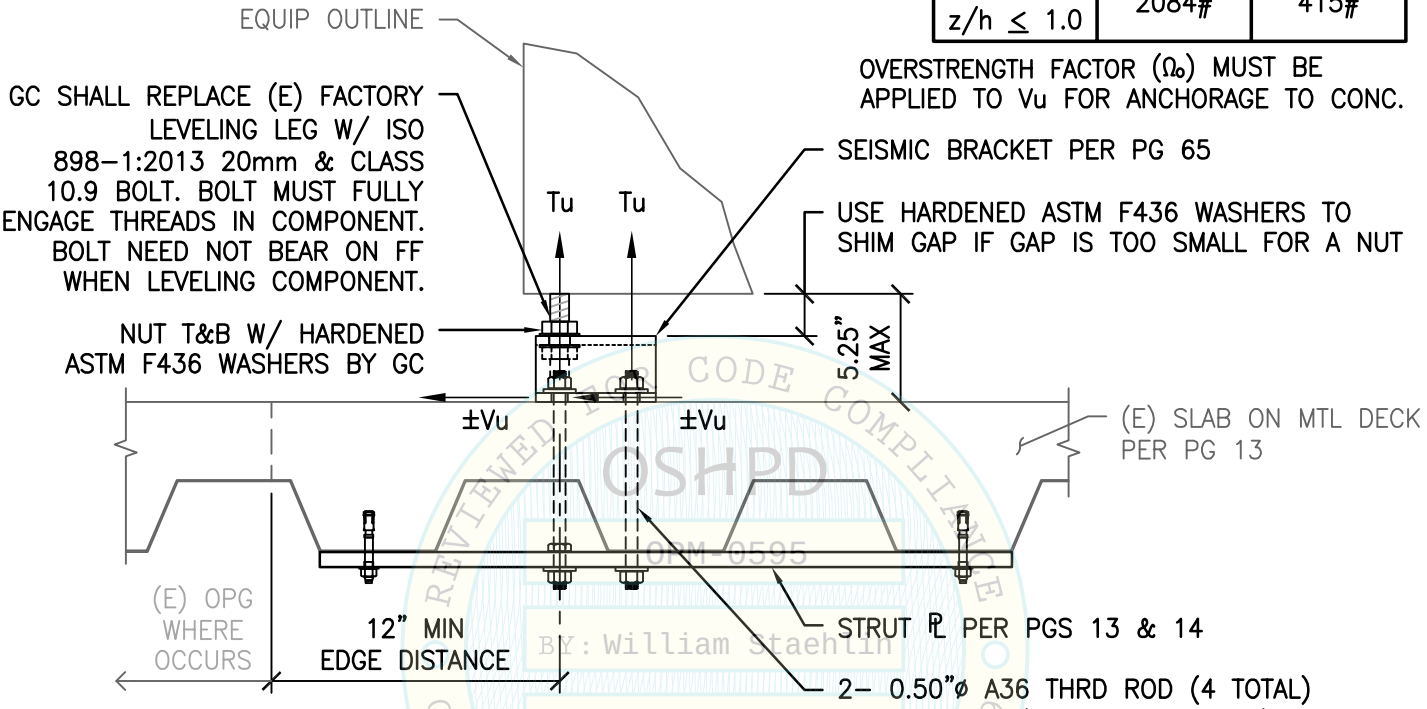
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2084#	415#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 7: ARCHITECT c16000 ANALYZER SUPPORTS & ATTACHMENTS 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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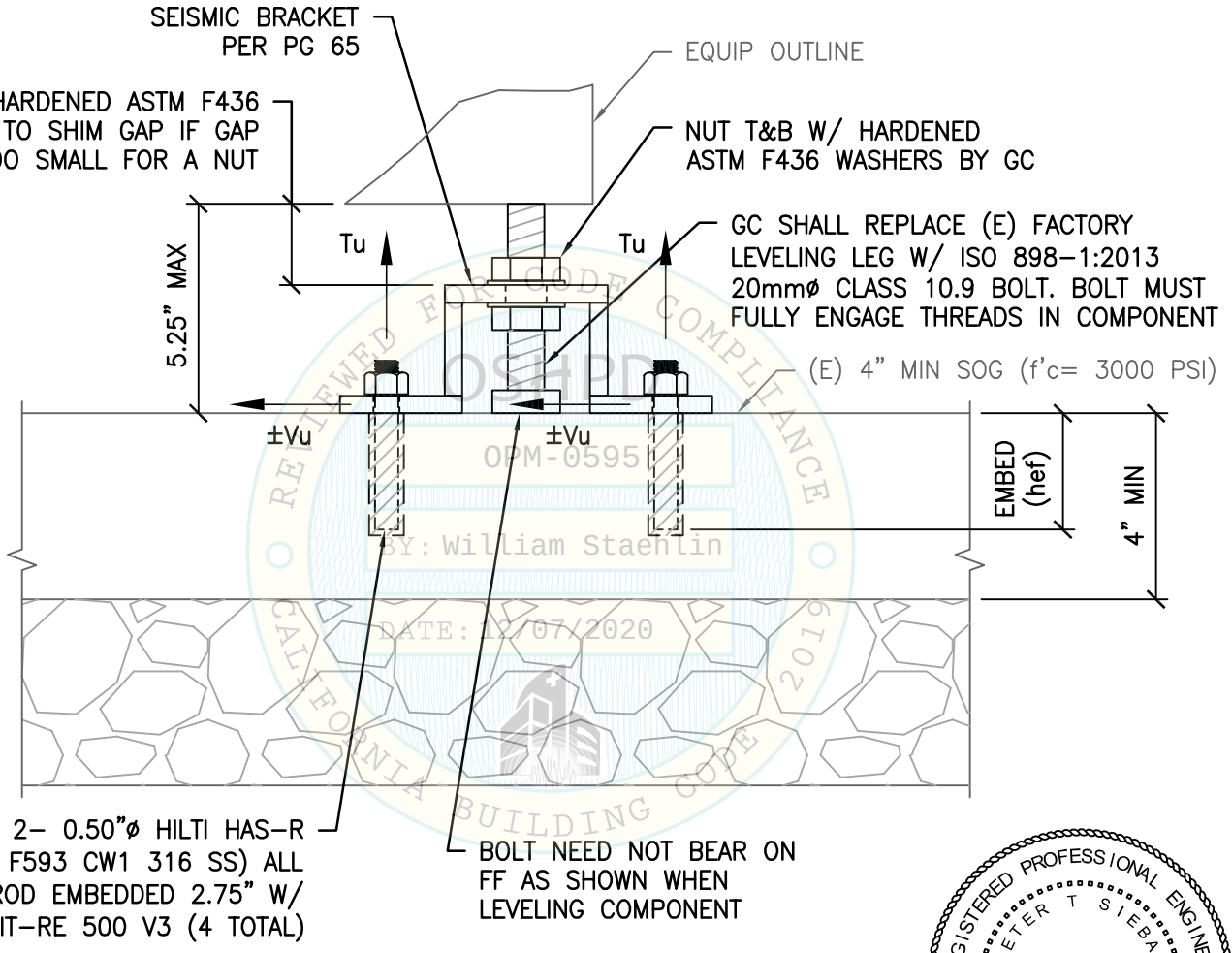
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1135#	230#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

NOT SEOR

SHEET TITLE: COMPONENT 7: ARCHITECT c16000 ANALYZER SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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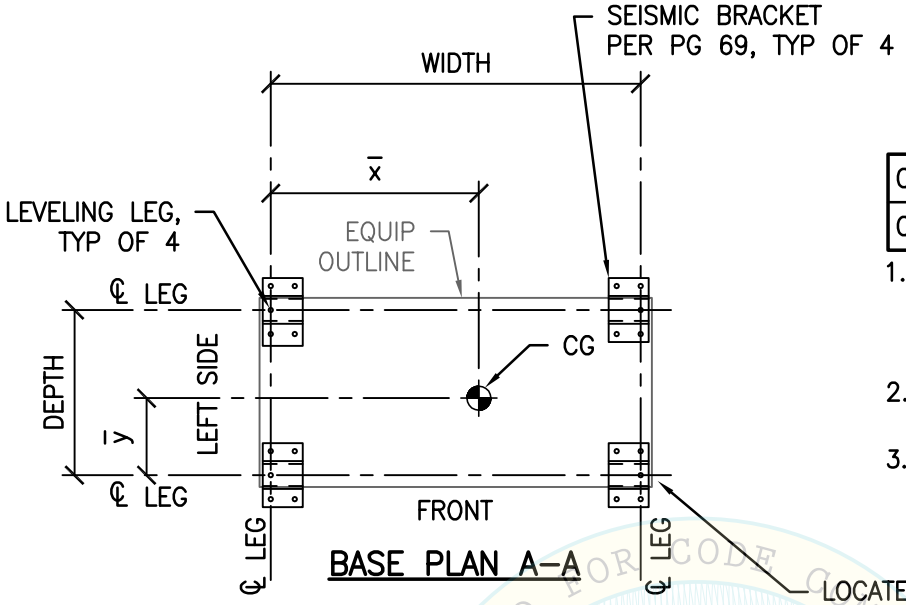
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

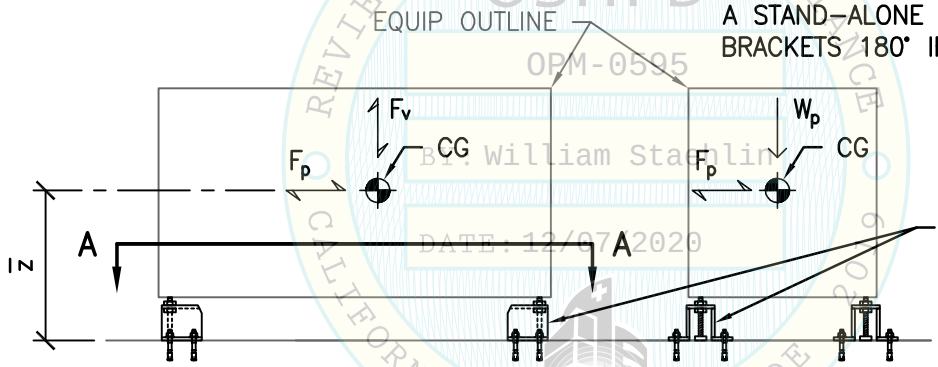


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	2256#	2658#	555#
CASE 2 [2]	1236#	1638#	312#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

LOCATE LEG UNDER UNIT (AS SHOWN) WHEN INTEGRATING ANALYZER W/ A c4000 OR c8000 ANALYZER. WHEN i1000sr IS A STAND–ALONE INSTRUMENT, ROTATE BRACKETS 180° IF DESIRED (NOT SHOWN).



FRONT ELEV RIGHT SIDE ELEV

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 10.
2. THIS INSTRUMENT MAY BE INSTALLED ADJ TO A c4000 ANALYZER. IF SO, THE DISTANCE BTW AB'S MAY BE REDUCED TO 5.0625". THIS CONDITION IS NOT SHOWN.

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

NOT SEOR

SHEET TITLE: COMPONENT 8: ARCHITECT i1000sr ANALYZER
BASE PLAN & ELEVATIONS

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

Job No:	20064
Date:	12/01/2020
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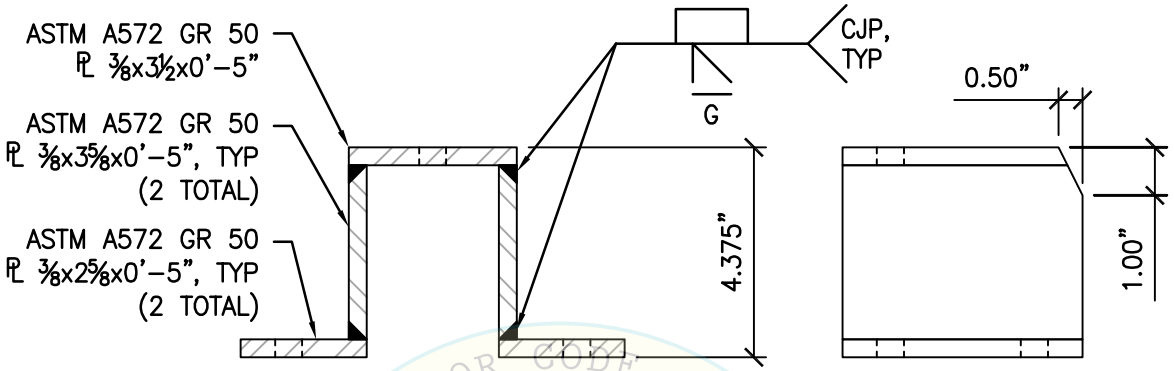
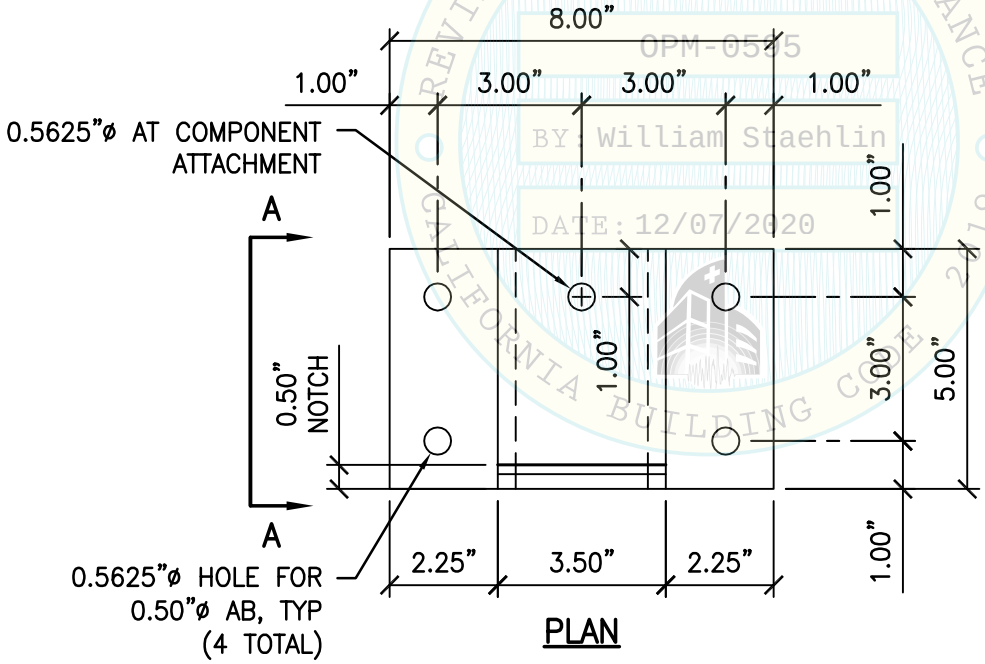
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 70 & 71.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 68.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



ELEV

SECTION A-A



PLAN

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

NOT SEOR

SHEET TITLE: COMPONENT 8: ARCHITECT i1000sr ANALYZER 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:	20064
Date:	12/01/2020
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C:\Users\camachom\appdata\local\temp\AcPublish_1280\S1.dwg Time:Nov30,2020-11:35am Login:camachom Dimscale:1 LTScale:6

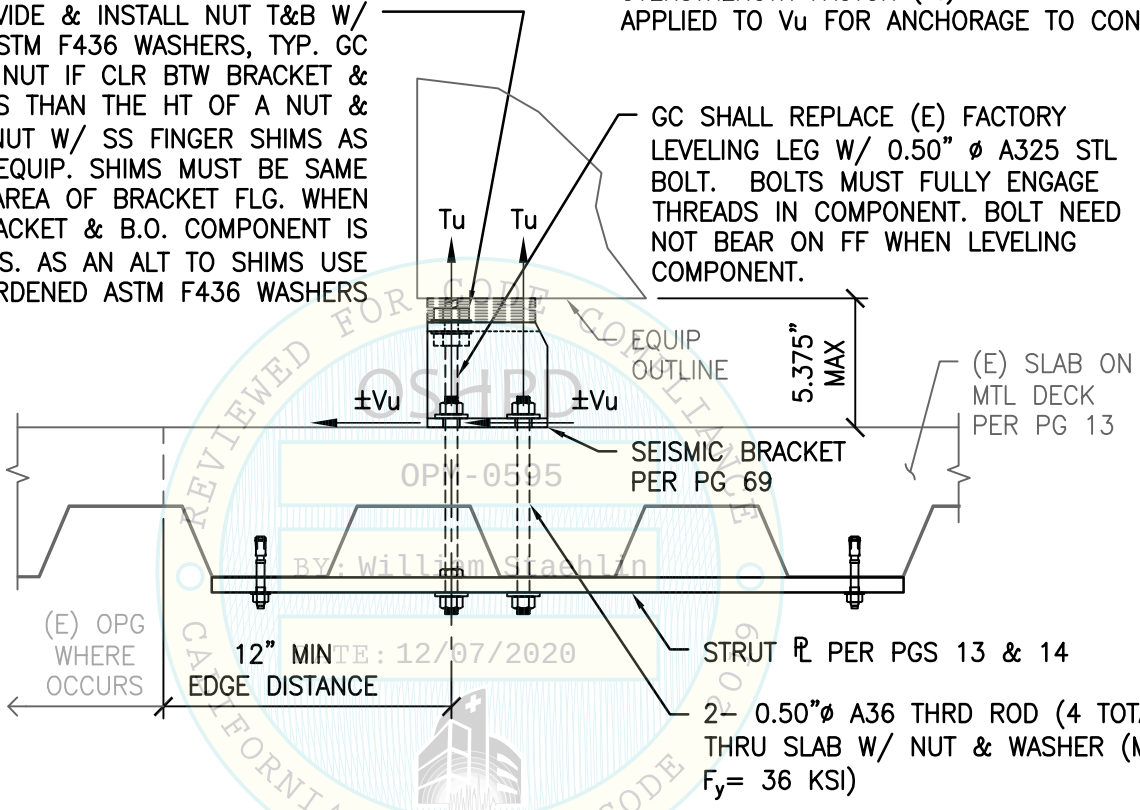
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1288#	184#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.

GC SHALL PROVIDE & INSTALL NUT T&B W/ HARDENED ASTM F436 WASHERS, TYP. GC SHALL OMIT TOP NUT IF CLR BTW BRACKET & EQUIP IS LESS THAN THE HT OF A NUT & REPLACE THIS NUT W/ SS FINGER SHIMS AS REQ TO LEVEL EQUIP. SHIMS MUST BE SAME DIMS AS BRG AREA OF BRACKET FLG. WHEN CLR BTW T.O. BRACKET & B.O. COMPONENT IS 0.50" OR LESS. AS AN ALT TO SHIMS USE STACKED HARDENED ASTM F436 WASHERS

GC SHALL REPLACE (E) FACTORY LEVELING LEG W/ 0.50" ø A325 STL BOLT. BOLTS MUST FULLY ENGAGE THREADS IN COMPONENT. BOLT NEED NOT BEAR ON FF WHEN LEVELING COMPONENT.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 8: ARCHITECT i1000sr ANALYZER SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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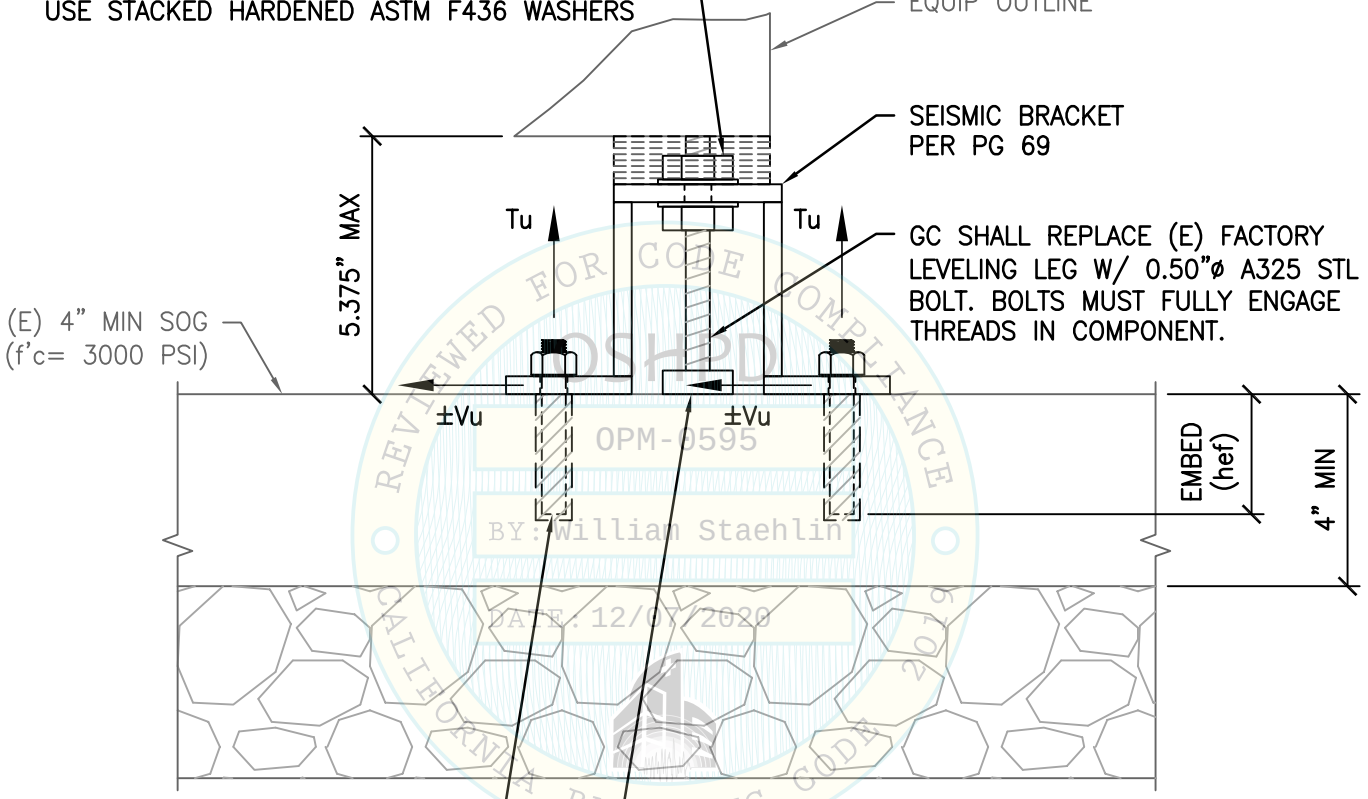
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

GC SHALL PROVIDE & INSTALL NUT T&B W/ HARDENED ASTM F436 WASHERS, TYP. GC SHALL OMIT TOP NUT IF CLR BTW BRACKET & EQUIP IS LESS THAN THE HT OF A NUT & REPLACE THIS NUT W/ SS FINGER SHIMS AS REQ TO LEVEL EQUIP. SHIMS MUST BE SAME DIMS AS BRG AREA OF BRACKET FLG. WHEN CLR BTW T.O. BRACKET & B.O. COMPONENT IS 0.50" OR LESS. AS AN ALT TO SHIMS USE STACKED HARDENED ASTM F436 WASHERS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	736#	104#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE
(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 8: ARCHITECT i1000sr ANALYZER SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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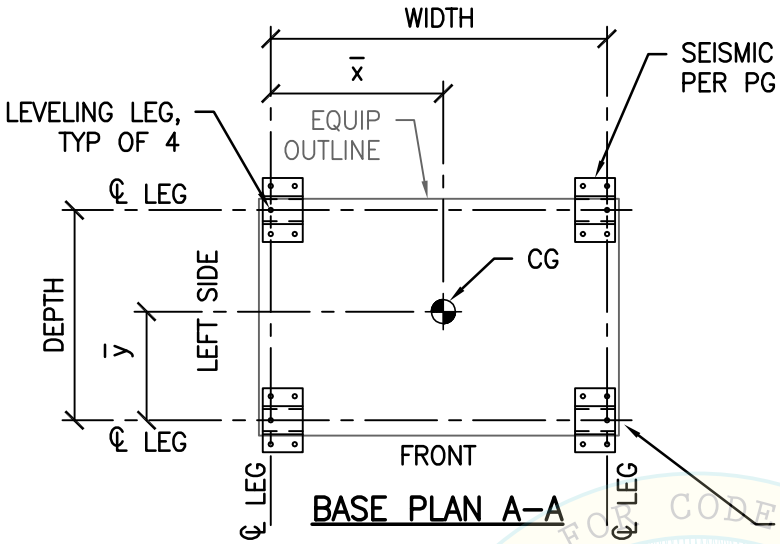
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

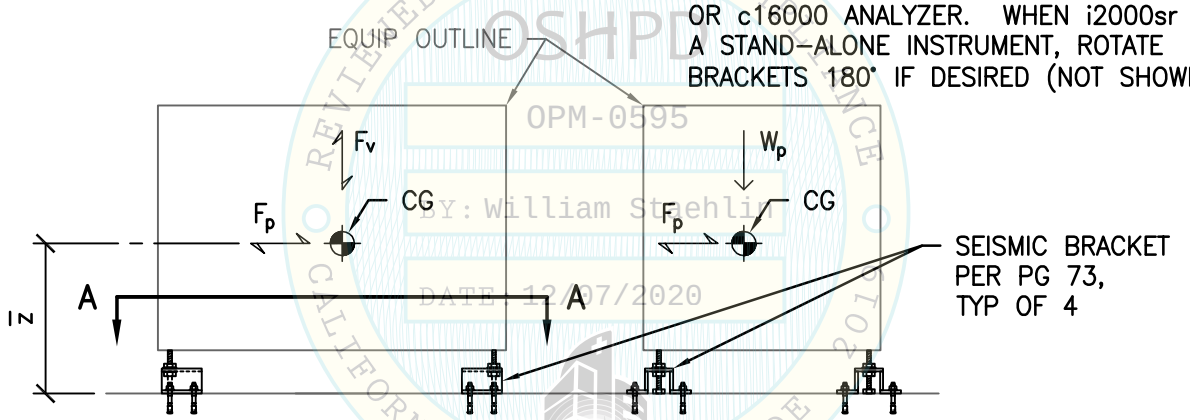


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	2710#	3352#	924#
CASE 2 [2]	1471#	2113#	520#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

LOCATE LEG UNDER UNIT (AS SHOWN) WHEN INTEGRATING ANALYZER W/ A c8000 OR c16000 ANALYZER. WHEN i2000sr IS A STAND–ALONE INSTRUMENT, ROTATE BRACKETS 180° IF DESIRED (NOT SHOWN).



FRONT ELEV

RIGHT SIDE ELEV

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 10.
2. THIS INSTRUMENT MAY BE INSTALLED ADJ TO A c8000 OR c16000 ANALYZER. IF SO, THE DISTANCE BTW AB'S MAY BE REDUCED TO 5.0625". THIS CONDITION IS NOT SHOWN.

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

NOT SEOR

SHEET TITLE: COMPONENT 9: ARCHITECT i2000sr ANALYZER BASE 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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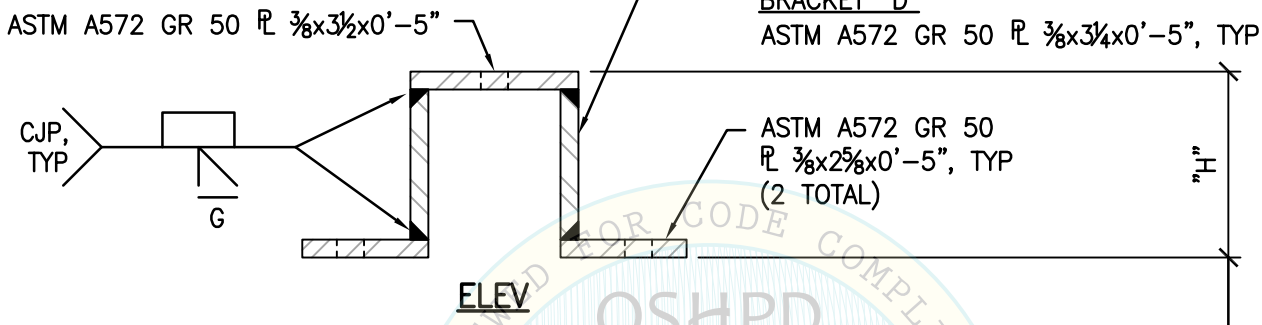
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

ABBOTT a3600 TRACK SYSTEMS
BRACKET "A"
H = 2.125" FOR 2.125" ≤ CLR ≤ 3.50"
BRACKET "B"
H = 3.375" FOR 3.375" ≤ CLR ≤ 4.75"

ABBOTT ARCHITECT ci8200 OR ci16200
BRACKET "C" H = 3.25"
BRACKET "D" H = 4.00"

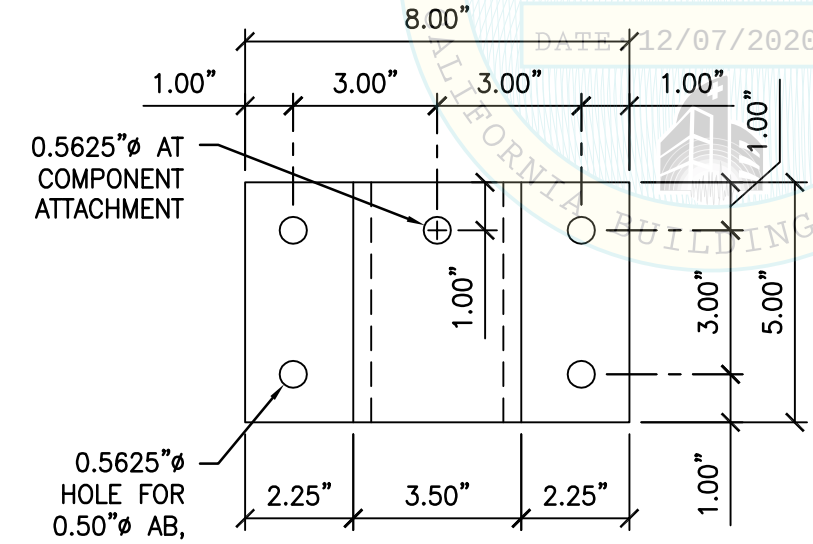
FOR ABBOTT USE: MAX TRACK HT PER BRACKET
A = 891mm
B = 920mm

BRACKET "A"
ASTM A572 GR 50 PL 3/8x1 3/8x0'-5", TYP (2 TOTAL)
BRACKET "B"
ASTM A572 GR 50 PL 3/8x2 5/8x0'-5", TYP (2 TOTAL)
BRACKET "C"
ASTM A572 GR 50 PL 3/8x2 1/2x0'-5", TYP (2 TOTAL)
BRACKET "D"
ASTM A572 GR 50 PL 3/8x3 1/4x0'-5", TYP (2 TOTAL)



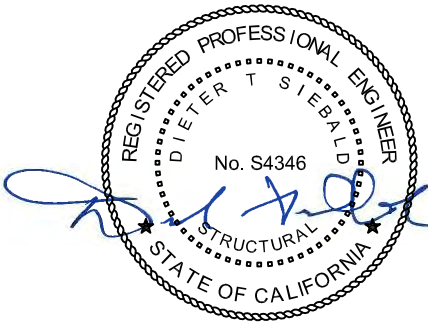
ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES. USE BRACKETS "A" OR "B" WHEN AN i2000sr IS PART OF AN AUTOMATED a3600 TRACK SYSTEM. USE BRACKETS "C" OR "D" WHEN INTEGRATING AN i2000sr WITH A c8000 OR c16000 TO FORM A ci8200 OR ci16200.



PLAN

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 74 & 75.
2. BRACKET6LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 72.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



NOT SEOR

SHEET TITLE: COMPONENT 9: ARCHITECT i2000sr ANALYZER 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:	20064
Date:	12/01/2020
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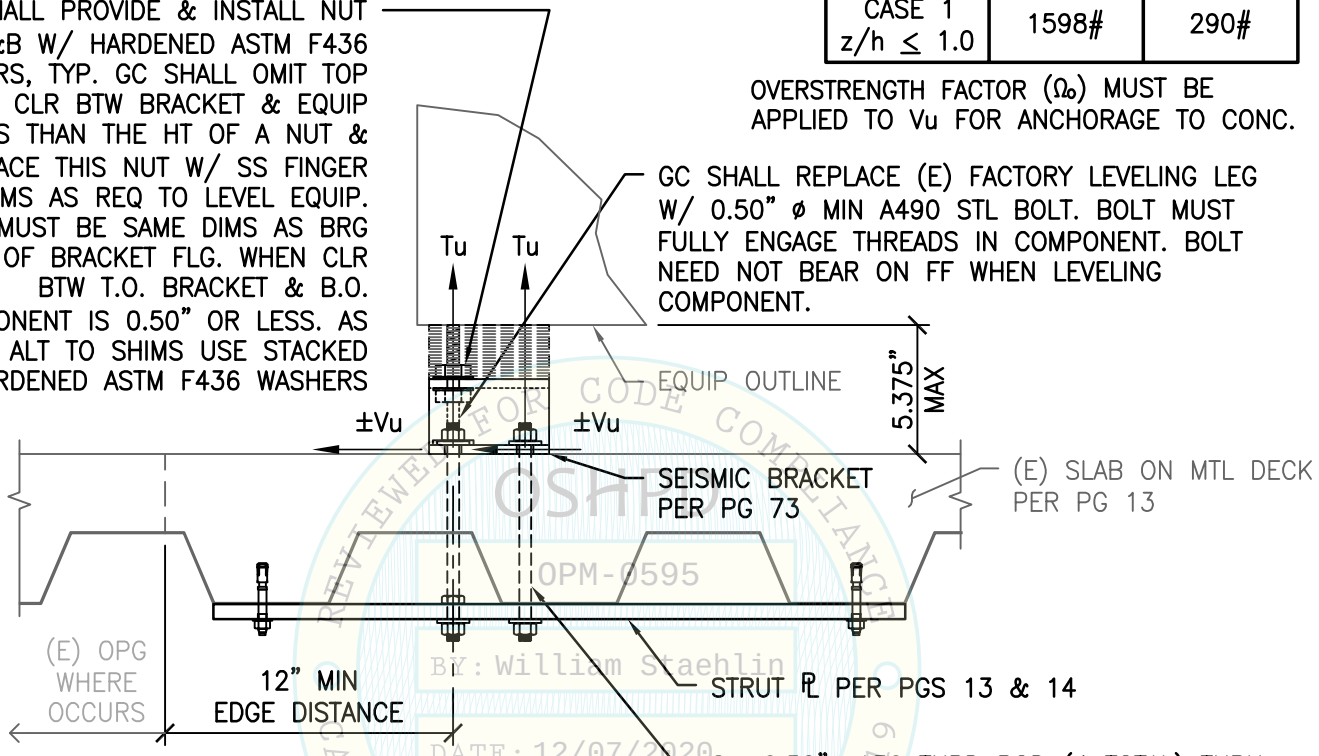
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1598#	290#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.

GC SHALL PROVIDE & INSTALL NUT T&B W/ HARDENED ASTM F436 WASHERS, TYP. GC SHALL OMIT TOP NUT IF CLR BTW BRACKET & EQUIP IS LESS THAN THE HT OF A NUT & REPLACE THIS NUT W/ SS FINGER SHIMS AS REQ TO LEVEL EQUIP. SHIMS MUST BE SAME DIMS AS BRG AREA OF BRACKET FLG. WHEN CLR BTW T.O. BRACKET & B.O. COMPONENT IS 0.50" OR LESS. AS AN ALT TO SHIMS USE STACKED HARDENED ASTM F436 WASHERS



GC SHALL REPLACE (E) FACTORY LEVELING LEG W/ 0.50" ø MIN A490 STL BOLT. BOLT MUST FULLY ENGAGE THREADS IN COMPONENT. BOLT NEED NOT BEAR ON FF WHEN LEVELING COMPONENT.

CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 9: ARCHITECT i2000sr ANALYZER SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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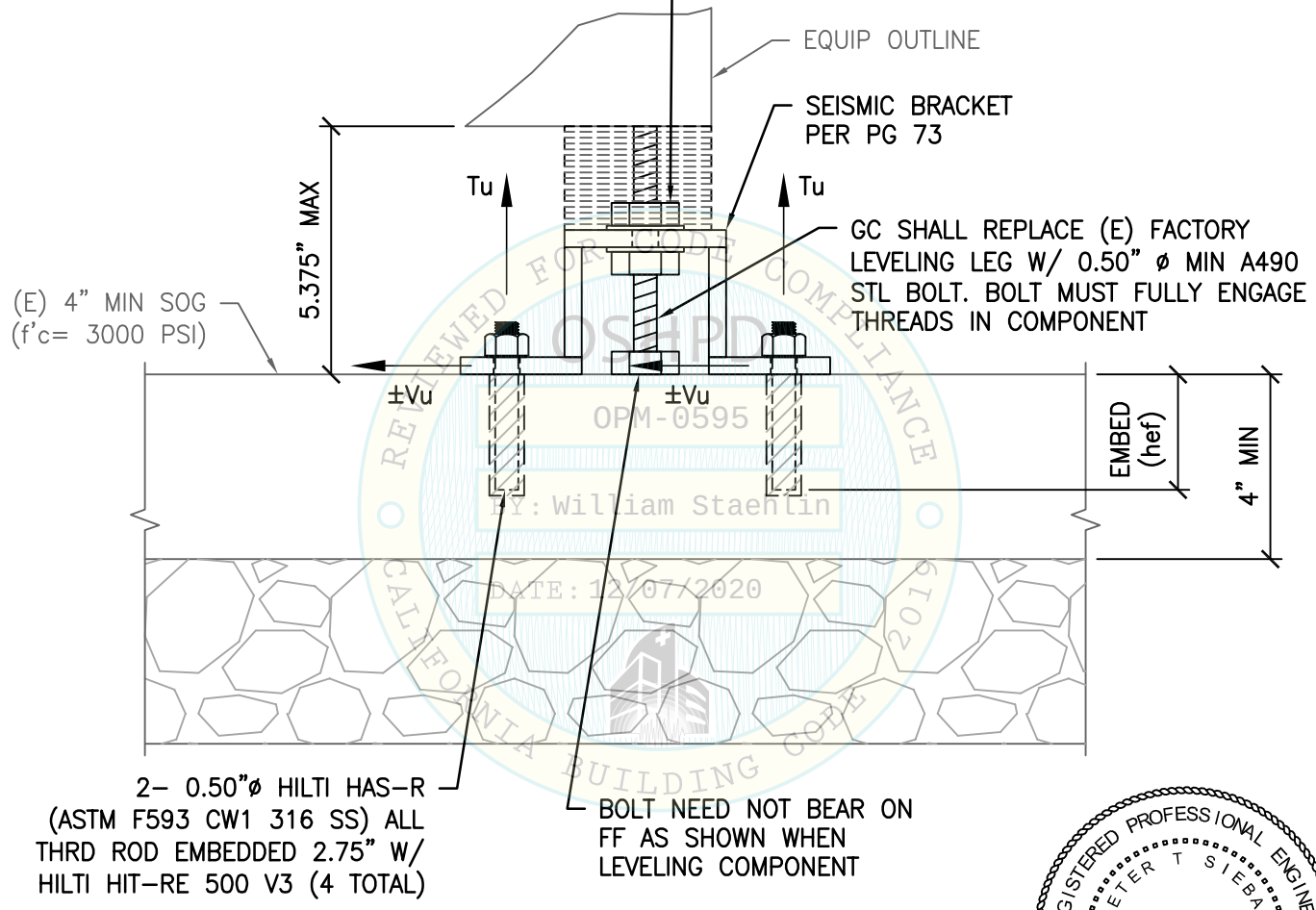
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

GC SHALL PROVIDE & INSTALL NUT T&B W/ HARDENED ASTM F436 WASHERS, TYP. GC SHALL OMIT TOP NUT IF CLR BTW BRACKET & EQUIP IS LESS THAN THE HT OF A NUT & REPLACE THIS NUT W/ SS FINGER SHIMS AS REQ TO LEVEL EQUIP. SHIMS MUST BE SAME DIMS AS BRG AREA OF BRACKET FLG. WHEN CLR BTW T.O. BRACKET & B.O. COMPONENT IS 0.50" OR LESS. AS AN ALT TO SHIMS USE STACKED HARDENED ASTM F436 WASHERS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1077#	139#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 9: ARCHITECT i2000sr ANALYZER SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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Job No:	20064
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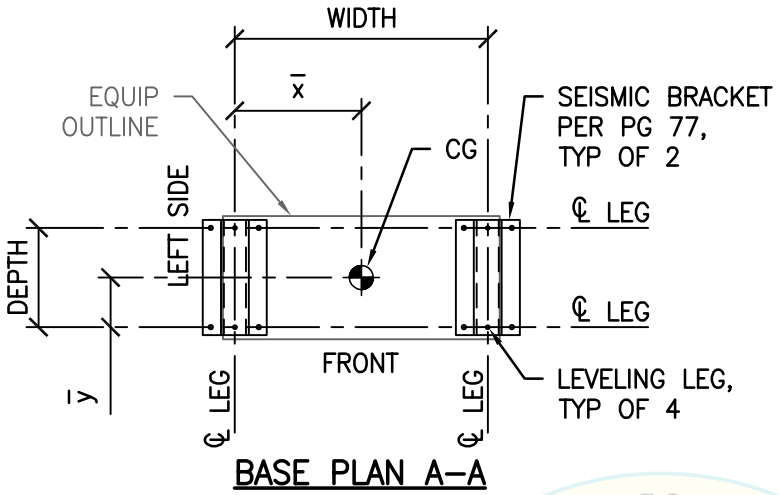
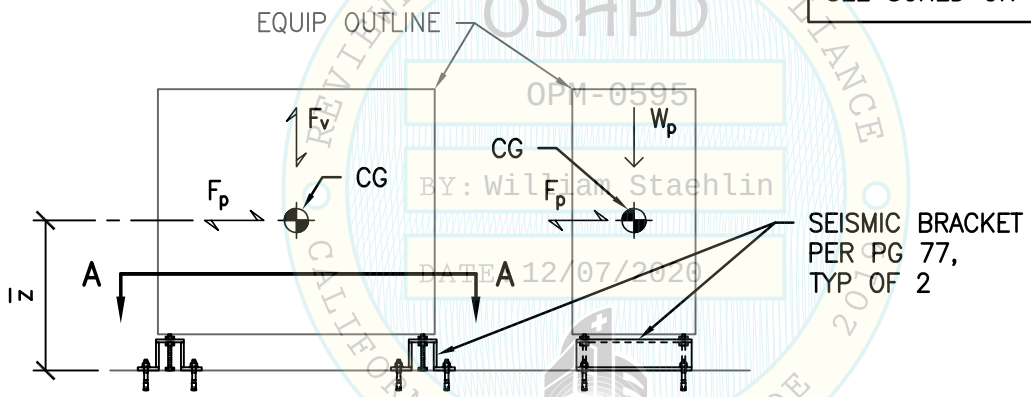


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	4297#	4731#	644#
CASE 2 [2]	2381#	2816#	363#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PAGE 10.



FRONT ELEV RIGHT SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 10: CARTESIAN CENTRIFUGE MODULE
BASE PLAN & ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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TEL (916) 920-2020
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Job No:	20064
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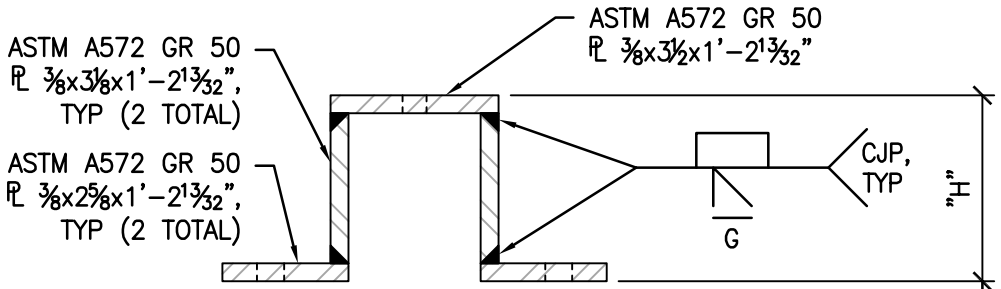
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 78 & 79.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 76.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

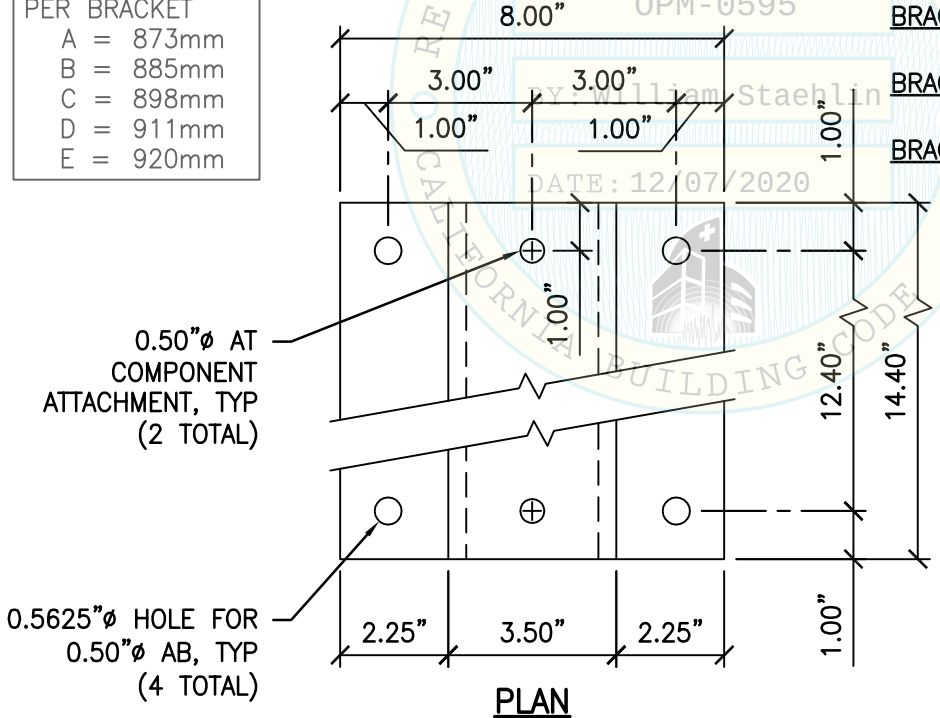


ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 2.125" FOR 2.125" ≤ CLR ≤ 2.75"
BRACKET B: "H" = 2.625" FOR 2.625" ≤ CLR ≤ 3.25"
BRACKET C: "H" = 3.125" FOR 3.125" ≤ CLR ≤ 3.75"
BRACKET D: "H" = 3.625" FOR 3.625" ≤ CLR ≤ 4.25"
BRACKET E: "H" = 4.125" FOR 4.125" ≤ CLR ≤ 4.75"

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 873mm
B = 885mm
C = 898mm
D = 911mm
E = 920mm



PLAN

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

NOT SEOR

SHEET TITLE: COMPONENT 10: CARTESIAN CENTRIFUGE MODULE 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:	20064
Date:	12/01/2020
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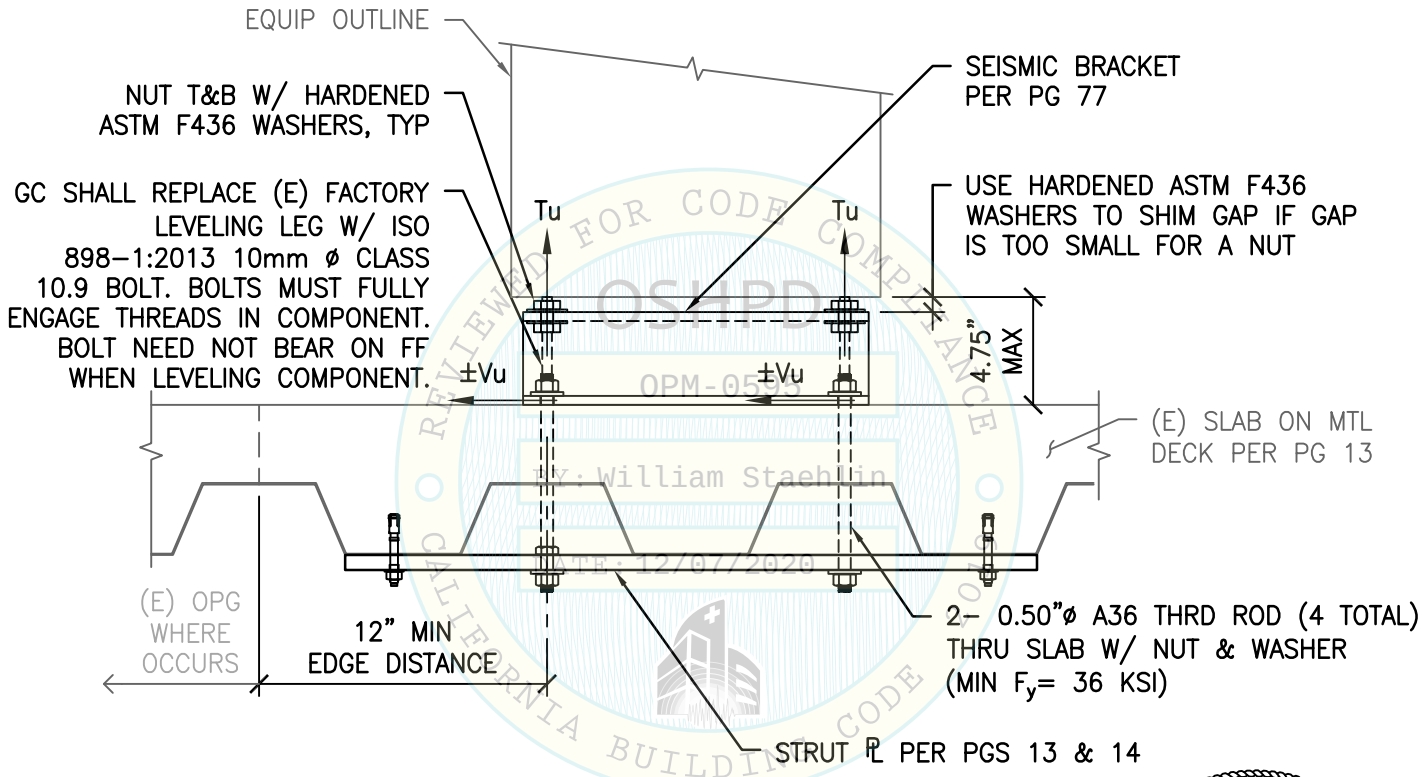
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2293#	322#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 10: CARTESIAN CENTRIFUGE MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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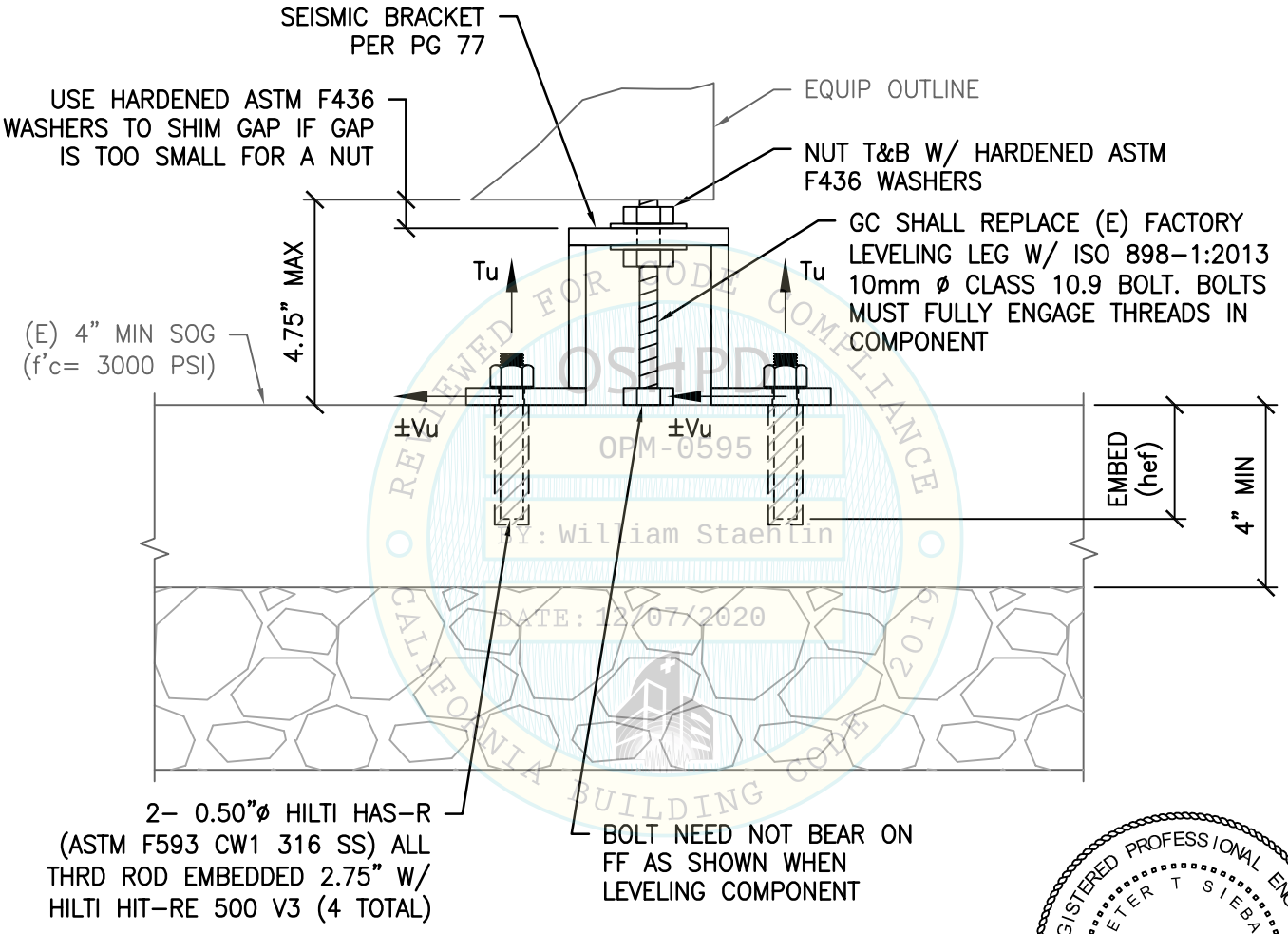
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1272#	181#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 10: CARTESIAN CENTRIFUGE MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	20064
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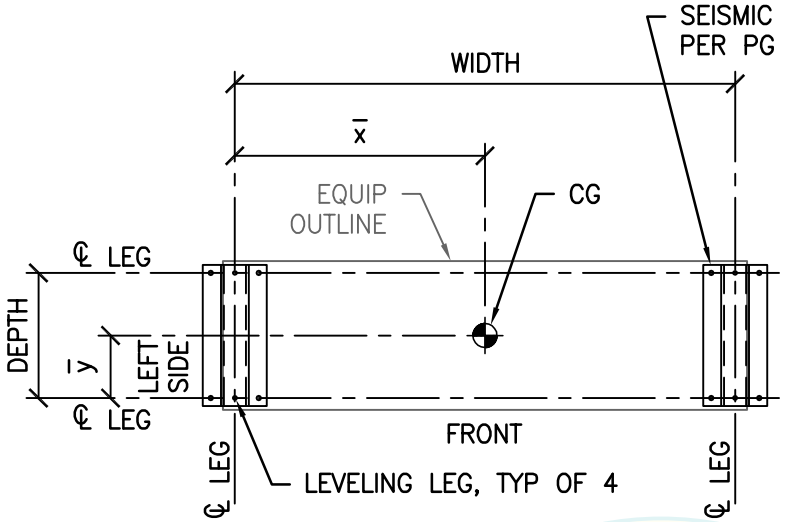
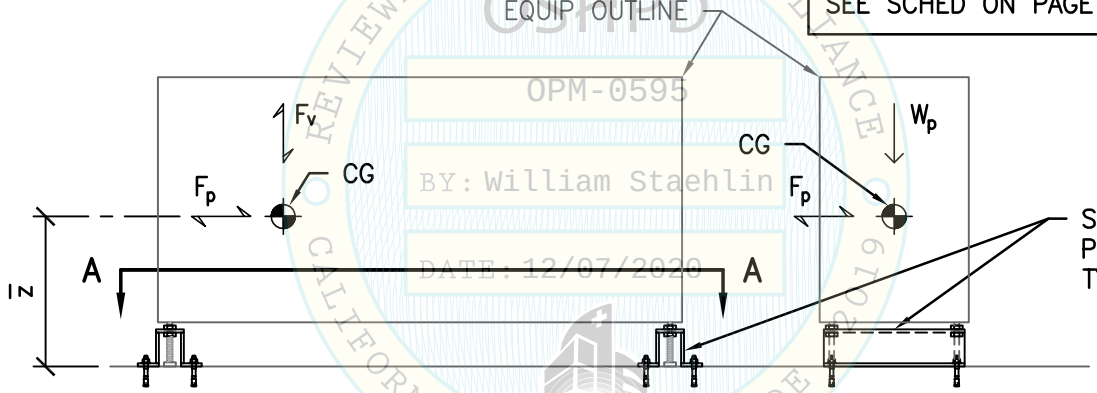


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1[3]	3368#	3831#	687#
CASE 2[2]	1856#	2319#	387#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PAGE 10.



FRONT ELEV

RIGHT SIDE ELEV

NOT SEOR

SHEET TITLE: COMPONENT 11: a3600 INPUT / OUTPUT MODULE
BASE PLAN & ELEVATIONS

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

Job No:	20064
Date:	12/01/2020
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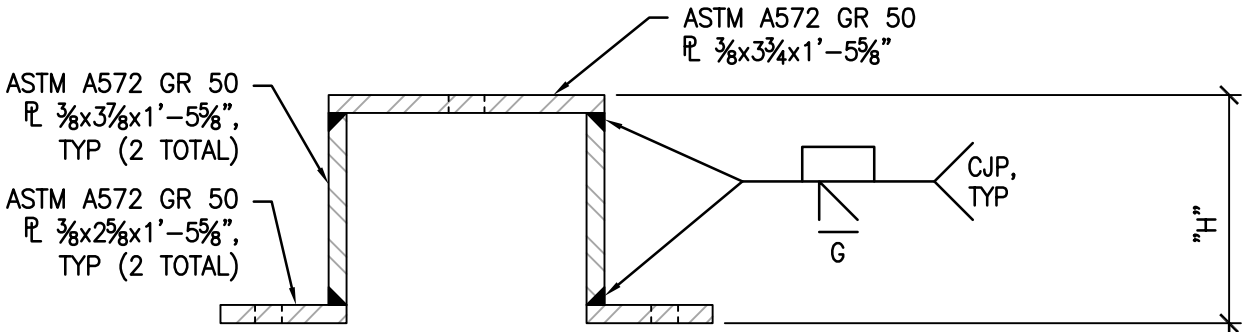
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 82 & 83.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 80.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

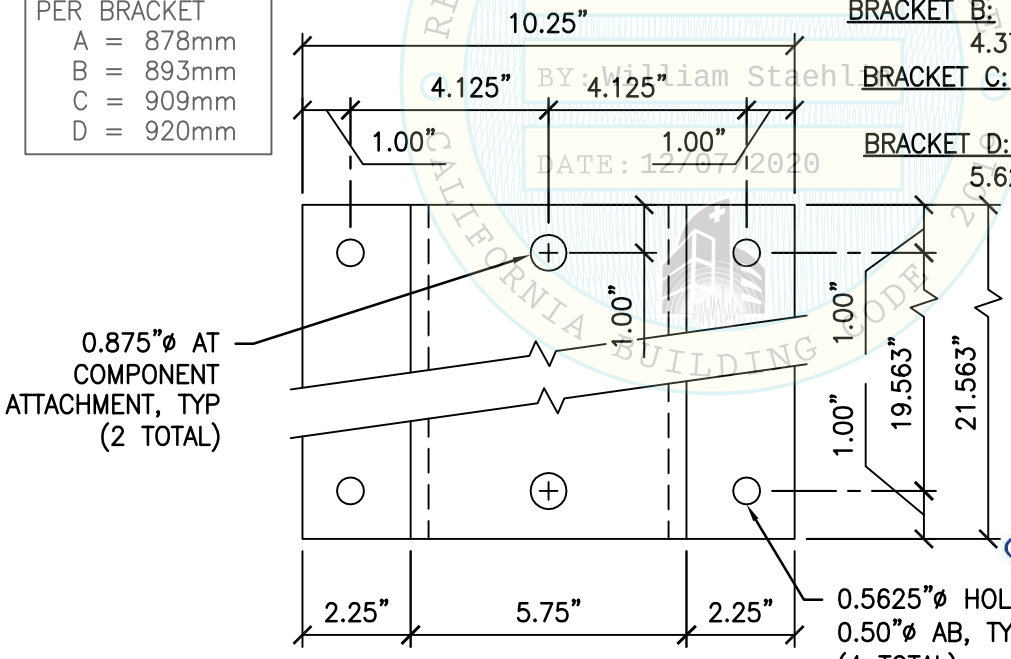


ELEV

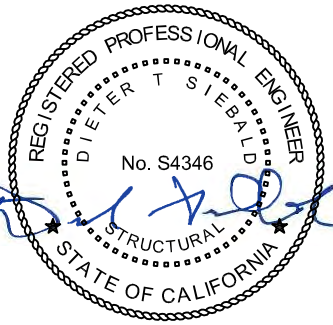
"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 878mm
B = 893mm
C = 909mm
D = 920mm

BRACKET A: "H" = 3.75" FOR 3.75" ≤ CLR ≤ 4.5"
BRACKET B: "H" = 4.375" FOR 4.375" ≤ CLR ≤ 5.125"
BRACKET C: "H" = 5.0" FOR 5.0" ≤ CLR ≤ 5.75"
BRACKET D: "H" = 5.625" FOR 5.625" ≤ CLR ≤ 6.375"



PLAN



NOT SEOR

SHEET TITLE: COMPONENT 11: a3600 INPUT / OUTPUT MODULE SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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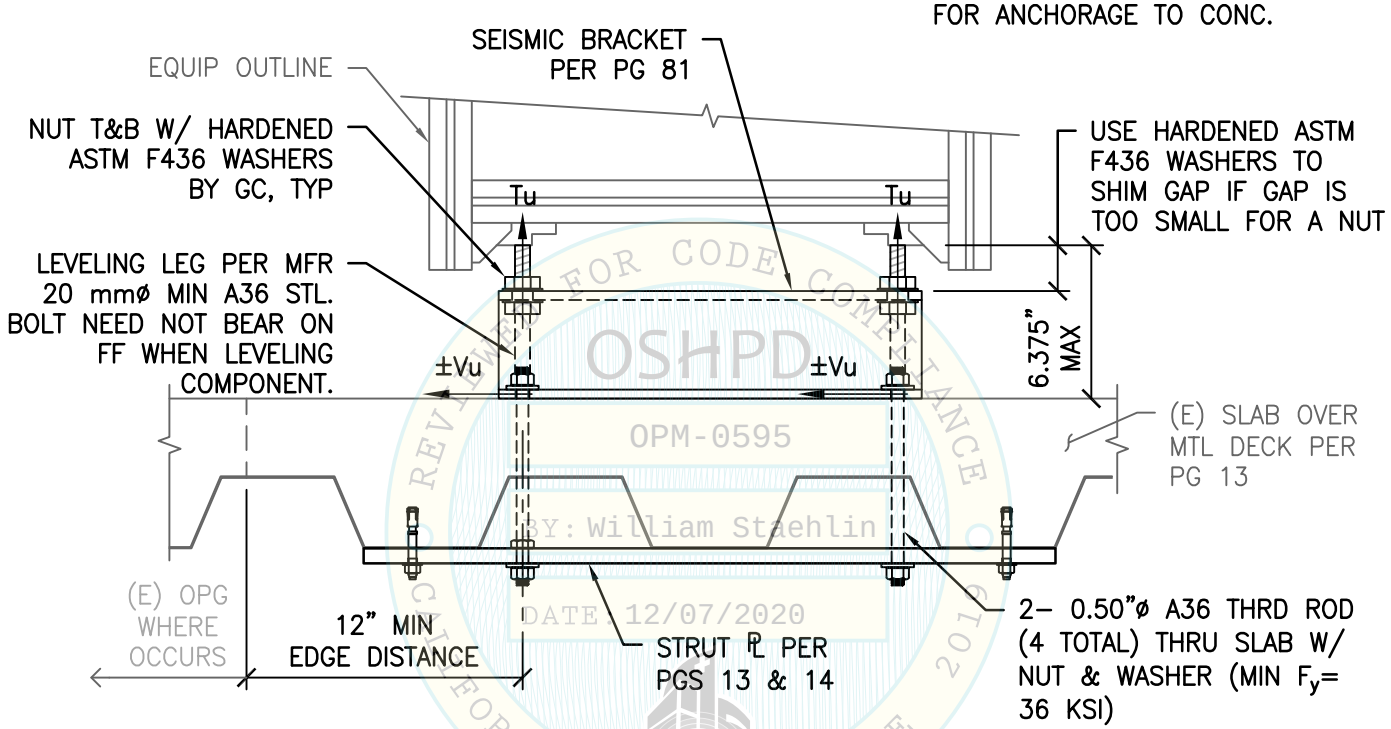
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1843#	344#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 11: a3600 INPUT / OUTPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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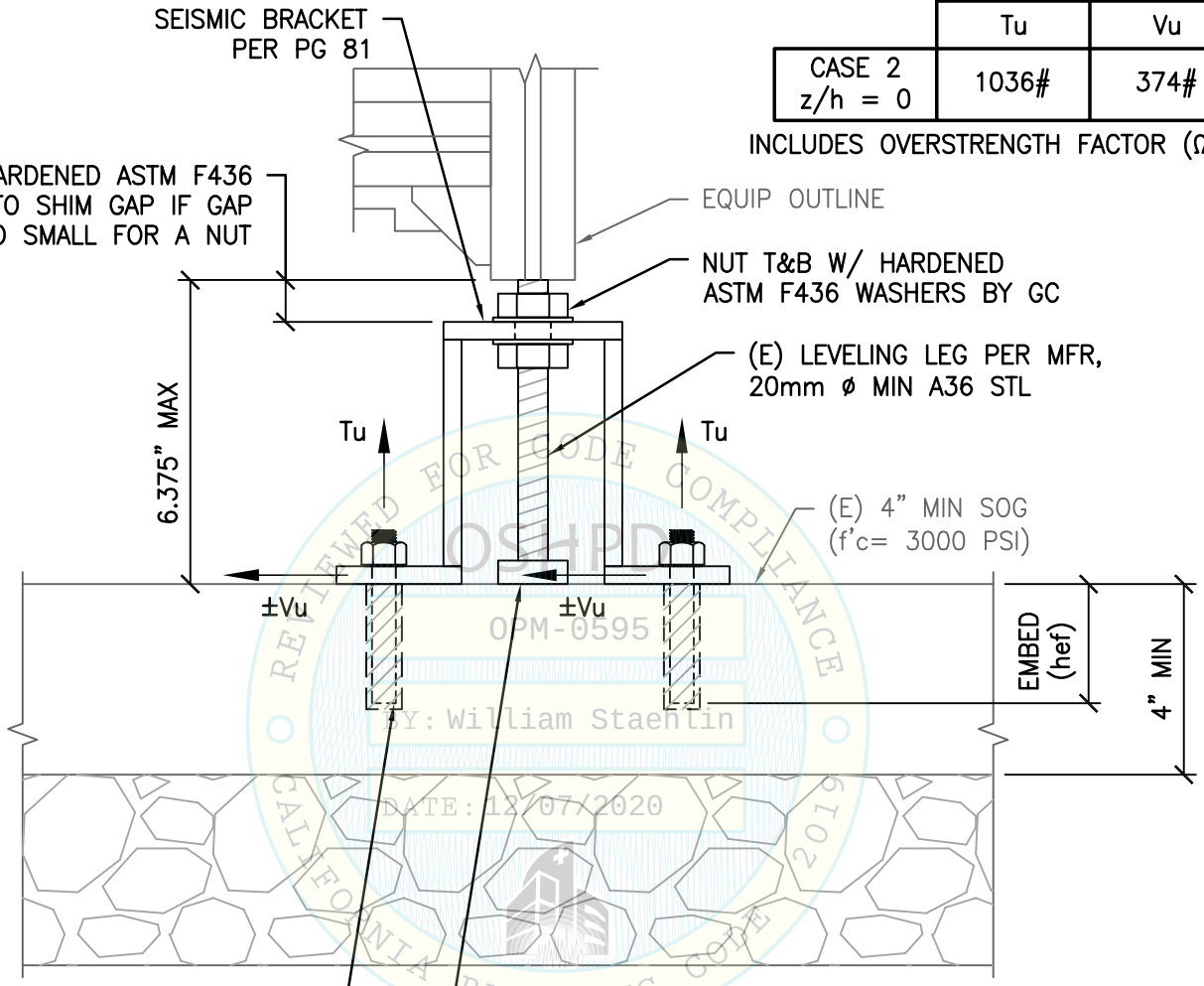
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1036#	374#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 11: a3600 INPUT / OUTPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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Job No:	20064
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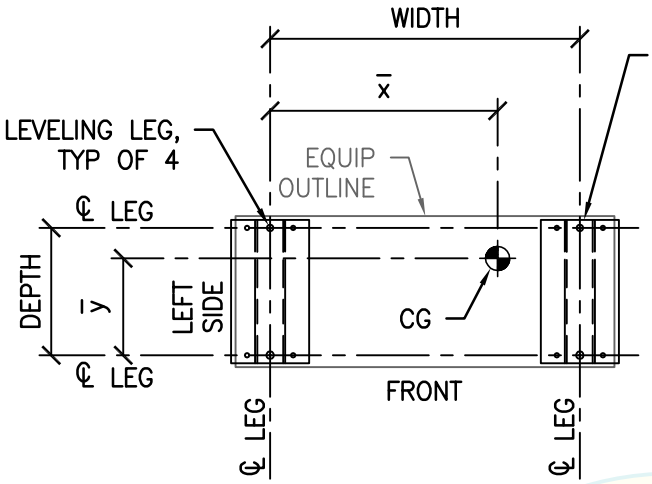
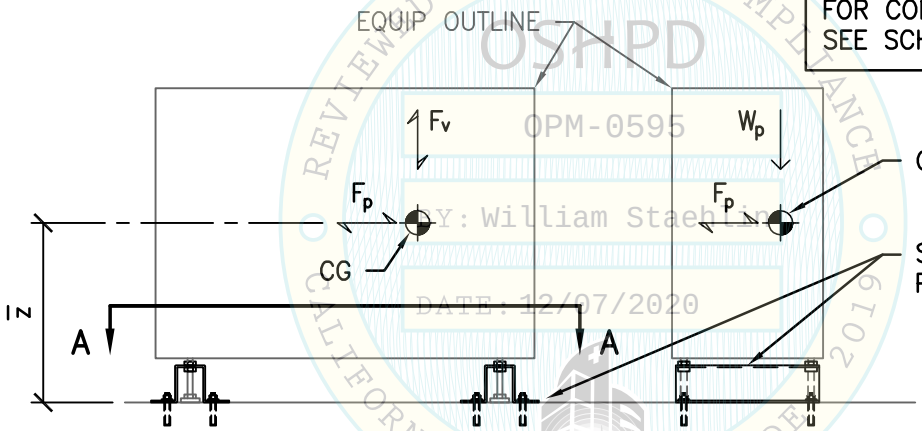


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	1464#	1849#	547#
CASE 2 [2]	791#	1176#	307#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PAGE 10.



FRONT ELEV

RIGHT SIDE ELEV

NOT SEOR

SHEET TITLE: COMPONENT 12: a3600 ALIQUOTER MODULE
BASE PLAN & ELEVATIONS

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

Job No:	20064
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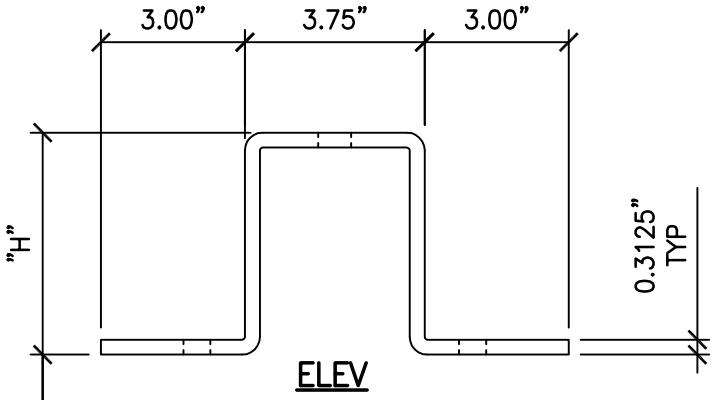
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



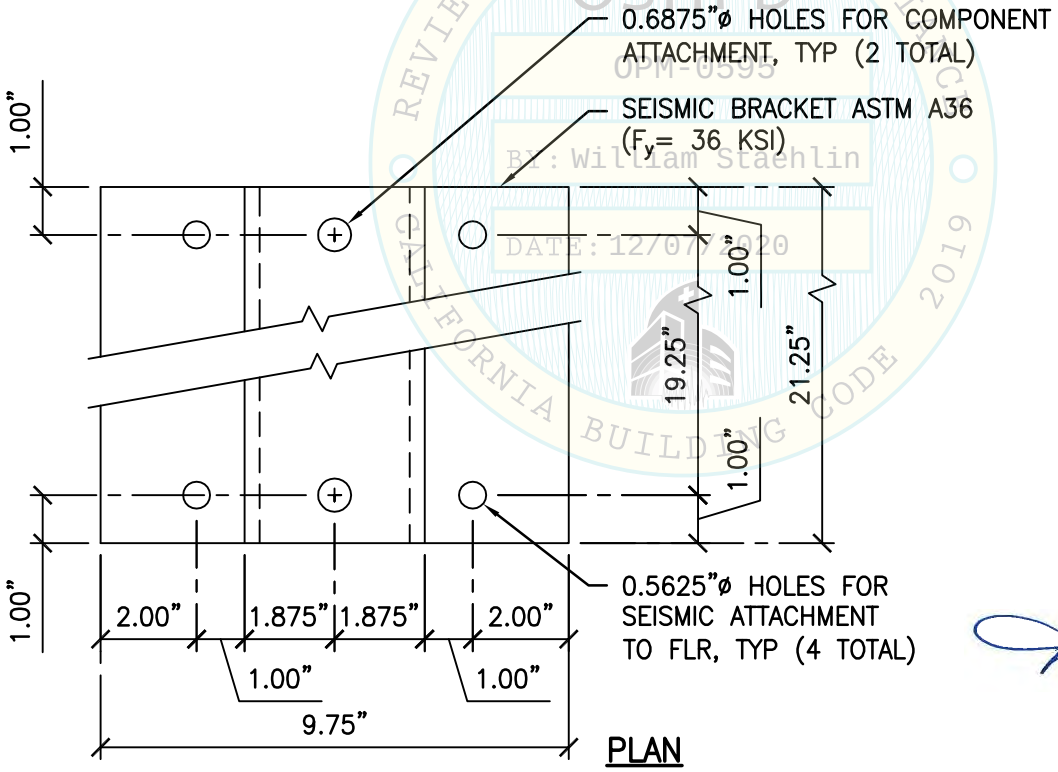
ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 86 & 87.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 84.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

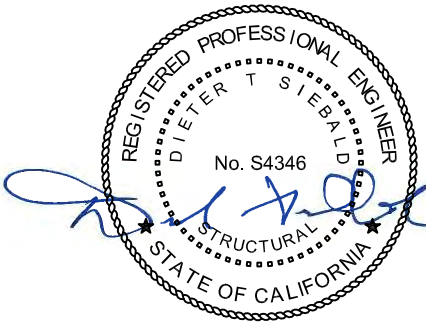
BRACKET A: "H" = 4.25" FOR 4.25" ≤ CLR ≤ 5.875"

BRACKET B: "H" = 5.125" FOR 5.125" ≤ CLR ≤ 6.75"



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 900mm
B = 920mm



NOT SEOR

SHEET TITLE: COMPONENT 12: a3600 ALIQUOTER MODULE
SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	20064
Date:	12/01/2020
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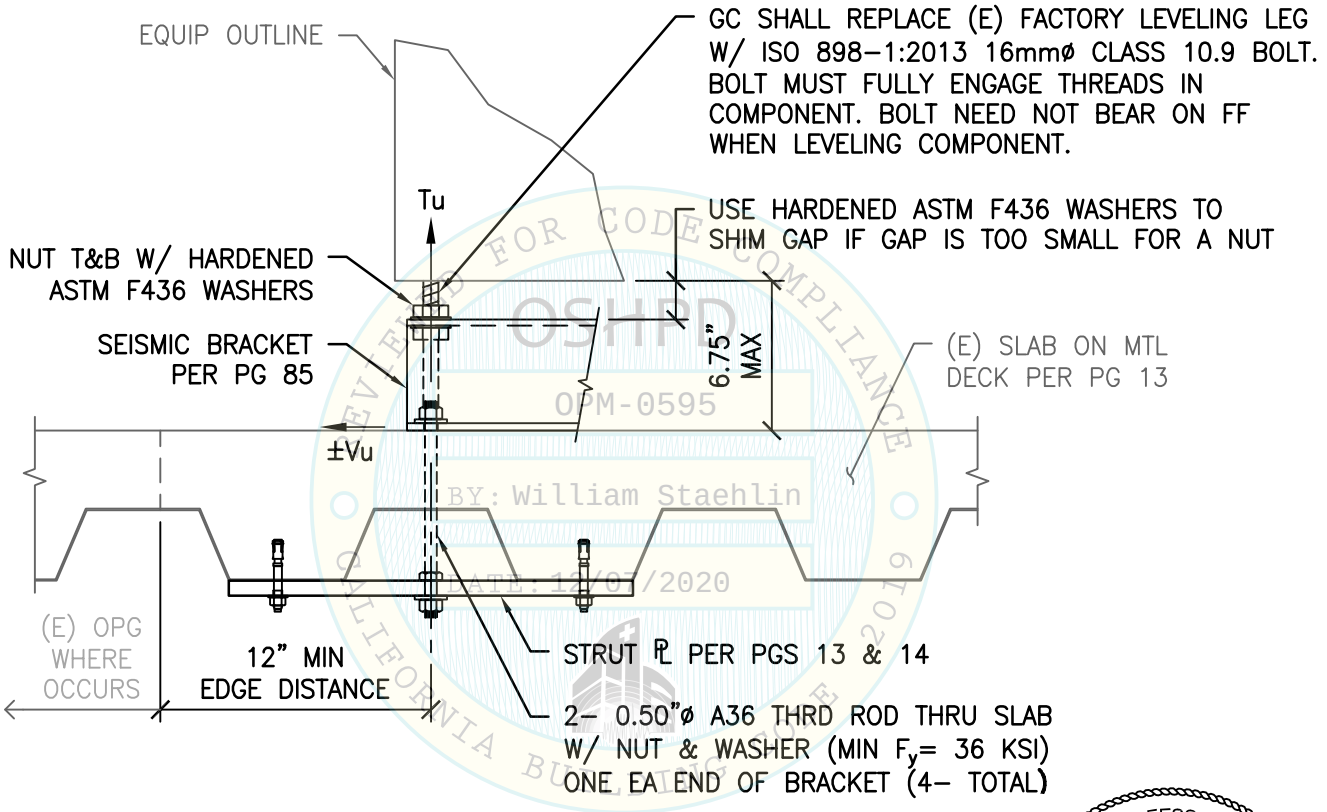
	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	856#	160#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 - SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 12: a3600 ALIQUOTER MODULE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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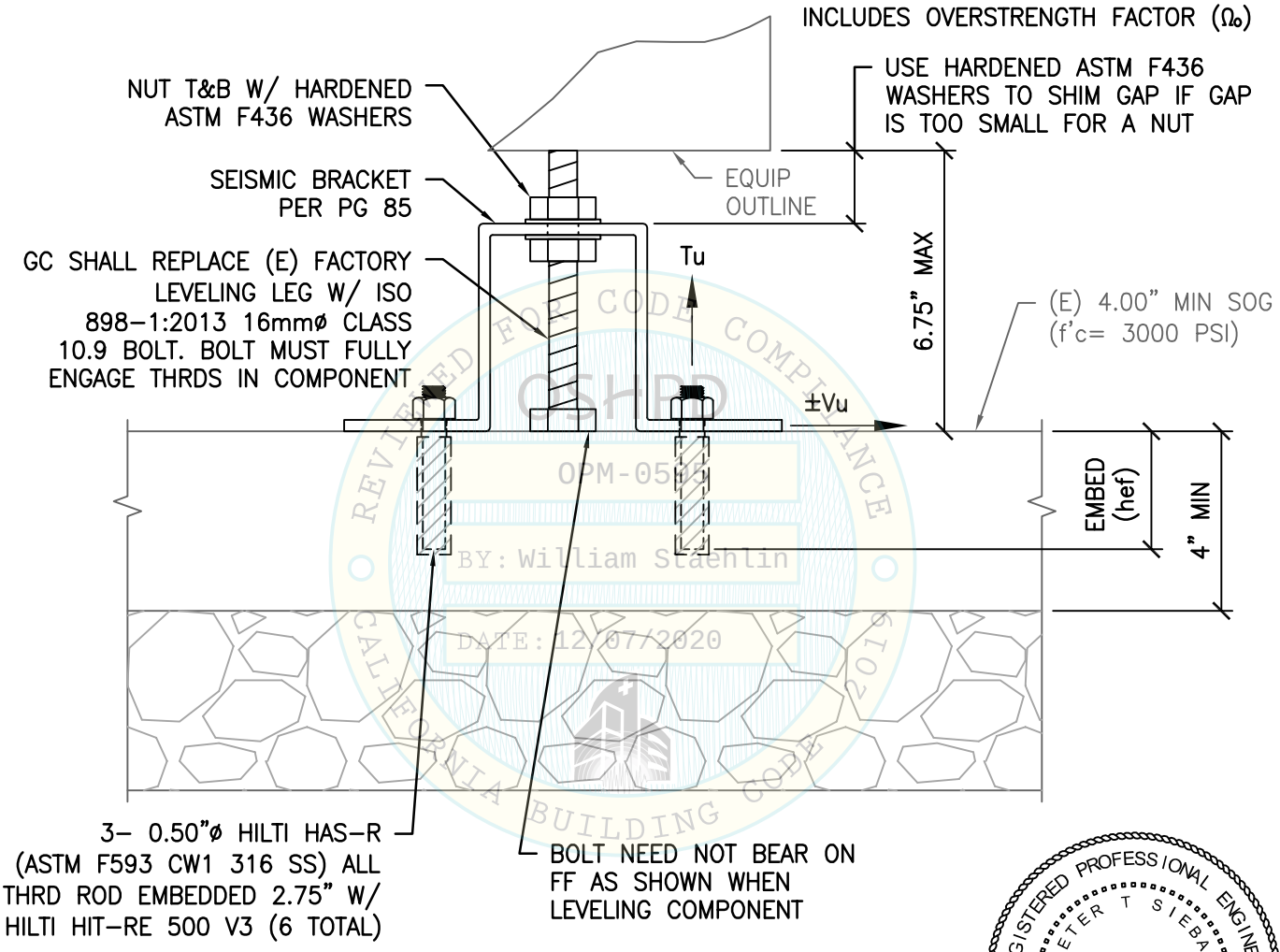
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	465#	147#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 12: a3600 ALIQUOTER MODULE
SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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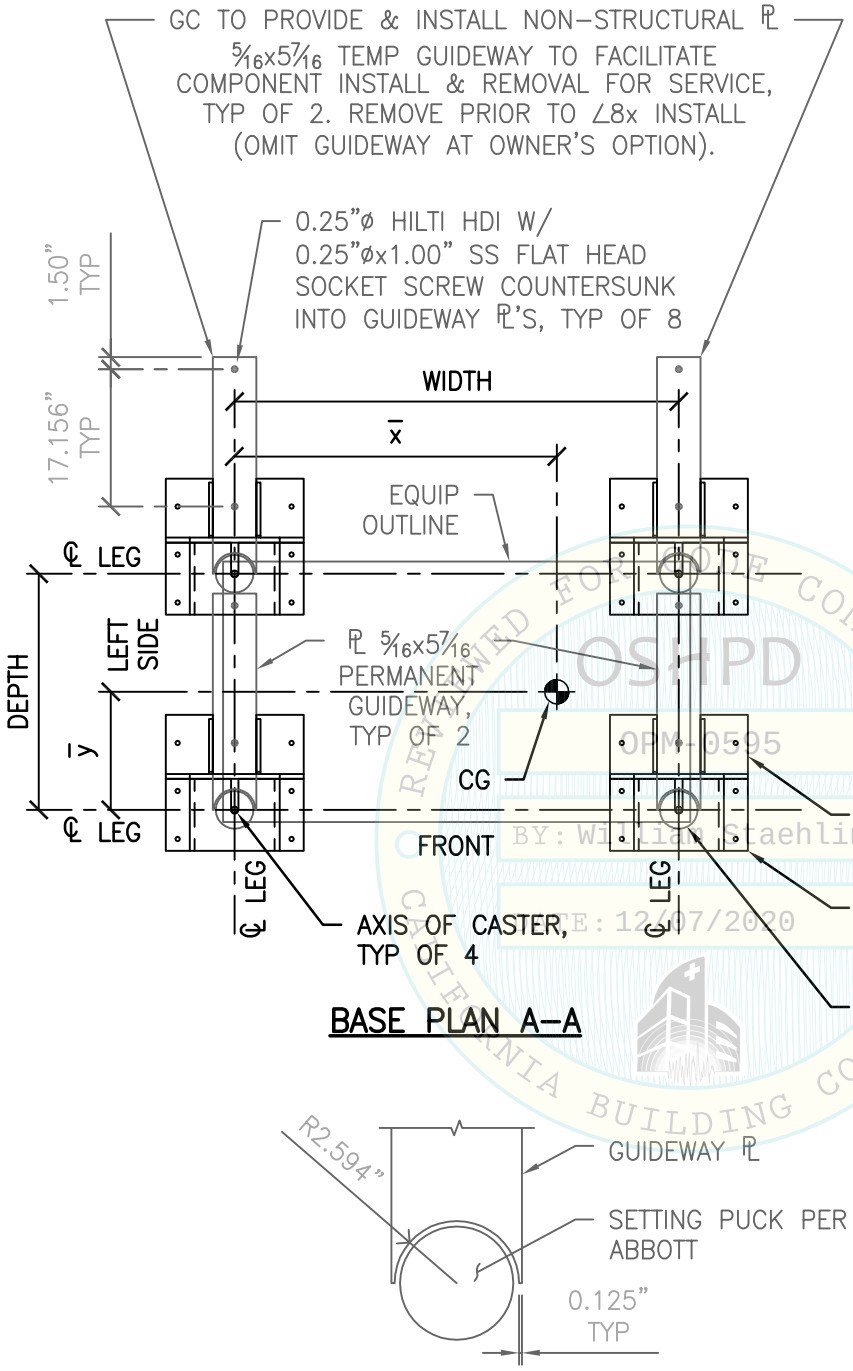
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



BASE PLAN A-A

GUIDEWAY ℄ AT SETTING PUCK

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	5345#	7279#	2809#
CASE 2 [2]	6774#	8708#	3511#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. GUIDEWAY ℄'S ARE FOR EQUIP PLACEMENT & NOT PART OF THE SEISMIC RESTRAINT.

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) BASE PLAN

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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Job No:	20064
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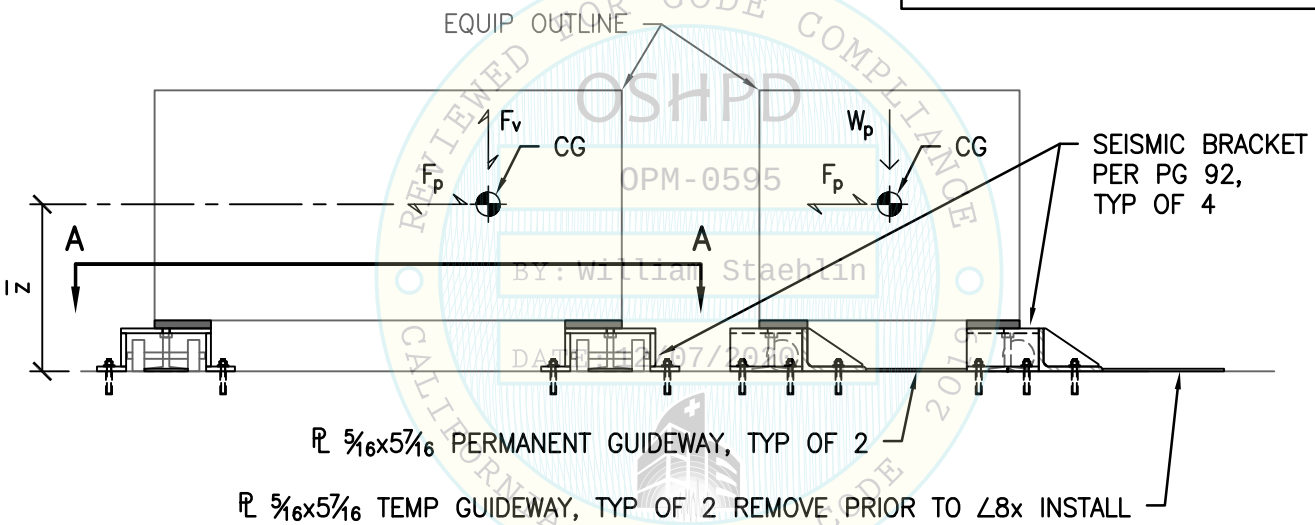
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTE:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. GUIDEWAY ℄'S ARE FOR EQUIP PLACEMENT & NOT PART OF THE SEISMIC RESTRAINT.



FRONT ELEV

RIGHT SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) ELEVATIONS

CYS STRUCTURAL ENGINEERS, INC.
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Job No:	20064
Date:	12/01/2020
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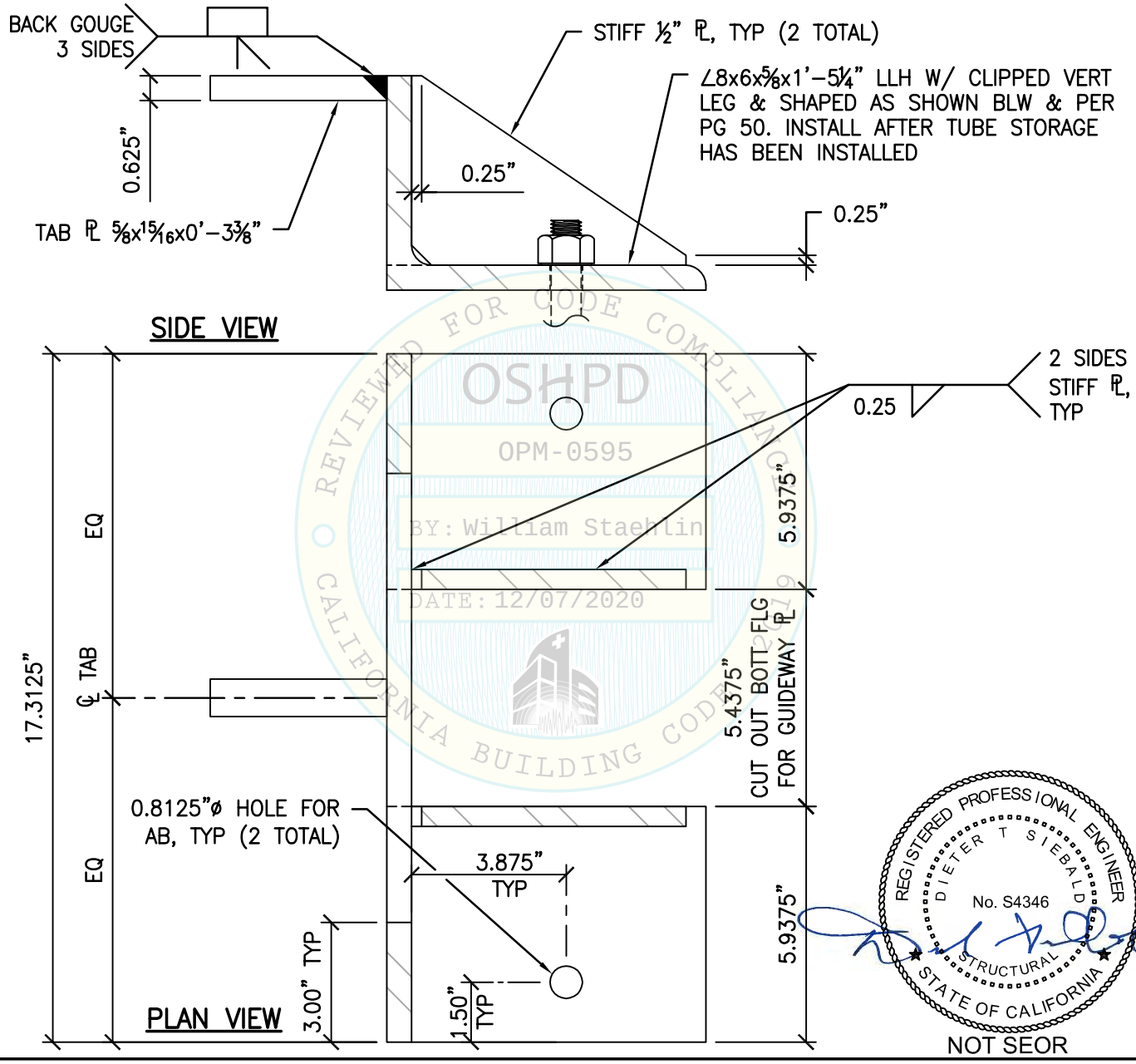
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 93 & 94.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 88.
3. SEE PG 7 FOR WELDING NOTES.
4. SEE PG 91 FOR MORE INFO.
5. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) SHAPED ANGLE DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	20064
Date:	12/01/2020
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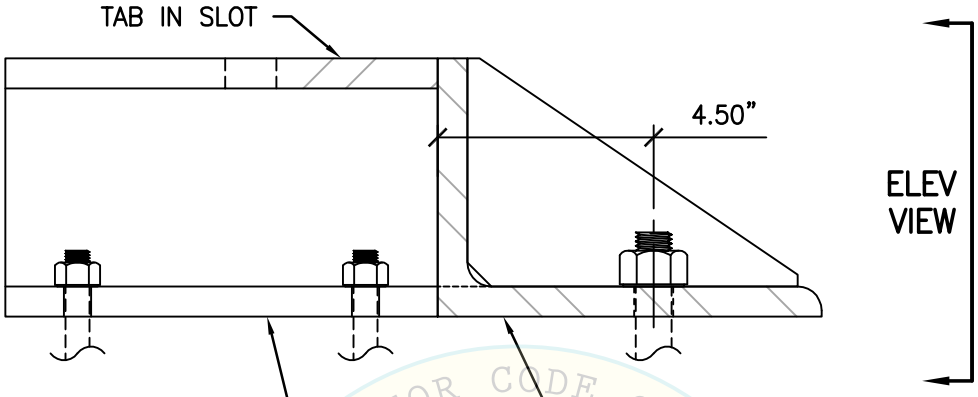
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 93 & 94.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 88.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



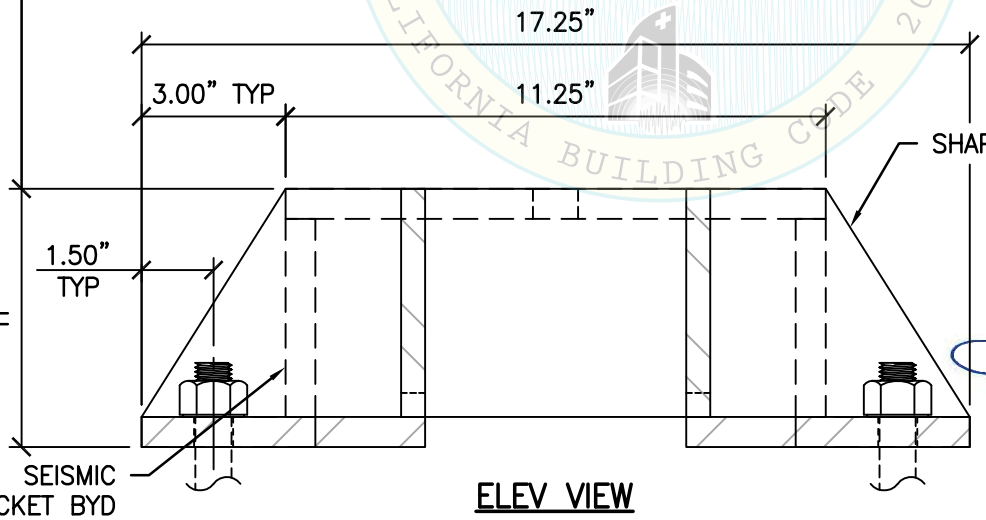
SEISMIC BRACKET PER PG 92. INSTALL BEFORE TUBE STORAGE IS INSTALLED

SIDE VIEW

∠8x6x⅝x1'-5¼" LLH W/ CLIPPED VERT LEG & SHAPED AS SHOWN BLW & PER PG 90. INSTALL AFTER TUBE STORAGE HAS BEEN INSTALLED

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 4.625" FOR 4.625" ≤ CLR ≤ 5.625"
BRACKET B: "H" = 5.375" FOR 5.375" ≤ CLR ≤ 6.375"
BRACKET C: "H" = 6.125" FOR 6.125" ≤ CLR ≤ 7.125"



ELEV VIEW

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 882mm
B = 900mm
C = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) SHAPED ANGLE DETAIL

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Job No:	20064
Date:	12/01/2020
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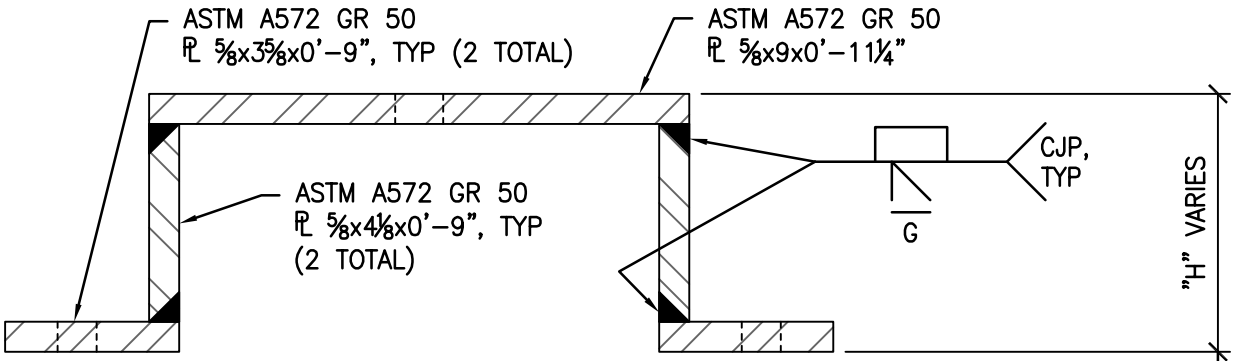
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

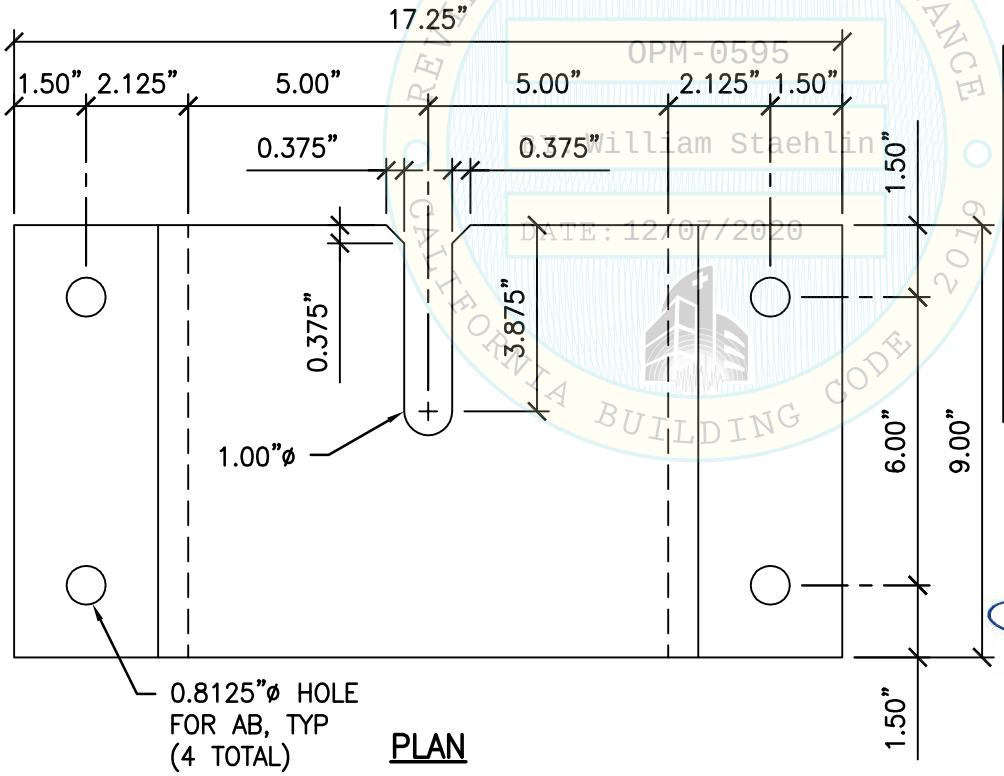


ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A:	"H" = 4.625"	FOR 4.625" ≤ CLR ≤ 5.625"
BRACKET B:	"H" = 5.375"	FOR 5.375" ≤ CLR ≤ 6.375"
BRACKET C:	"H" = 6.125"	FOR 6.125" ≤ CLR ≤ 7.125"

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 882mm
B = 900mm
C = 920mm



PLAN

NOTES:

1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 93 & 94.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 88.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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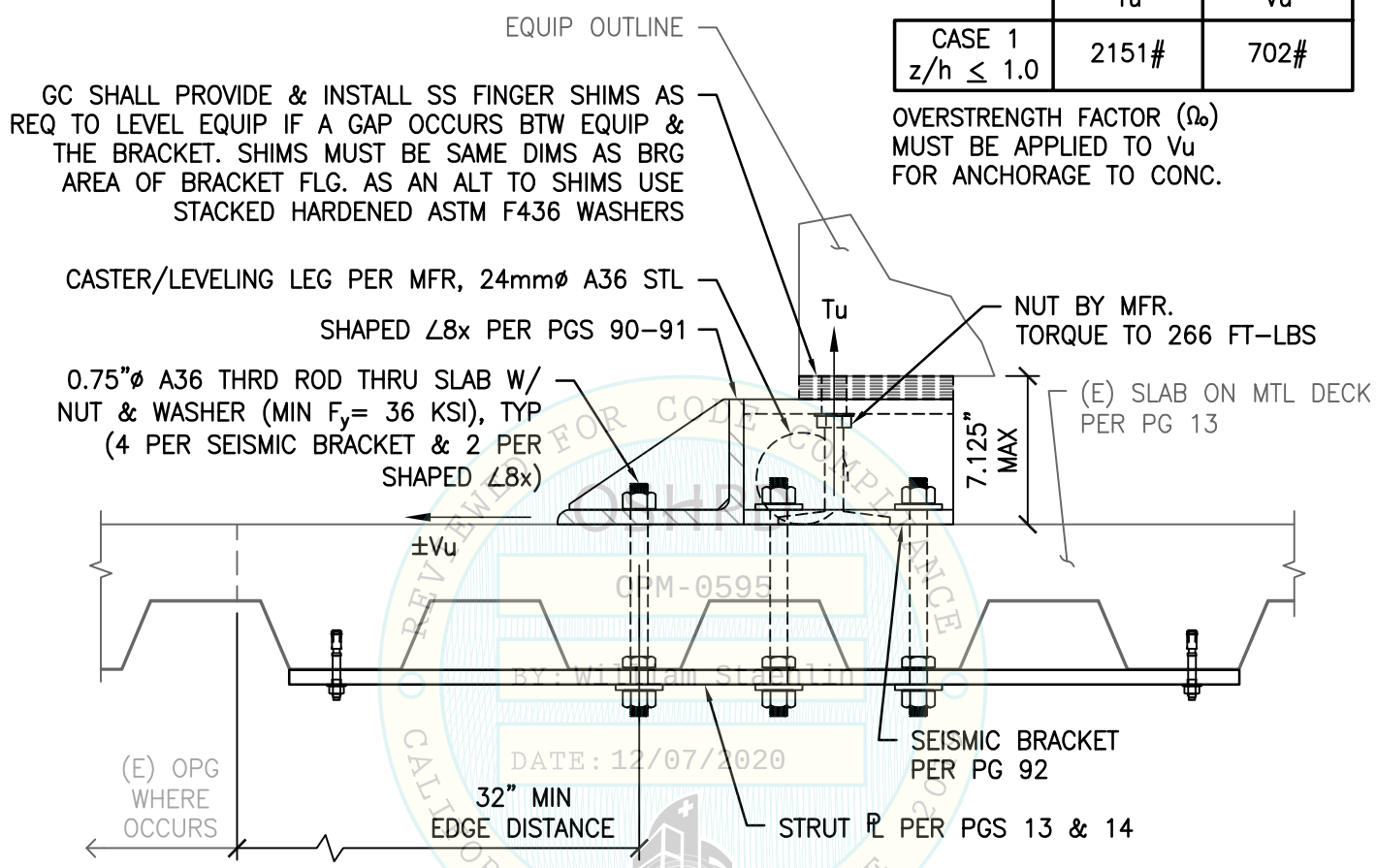
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2151#	702#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



NOTE:
1. GUIDEWAY PL'S NOT SHOWN FOR CLARITY.

CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 TUBE CAPACITY) SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
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TEL (916) 920-2020
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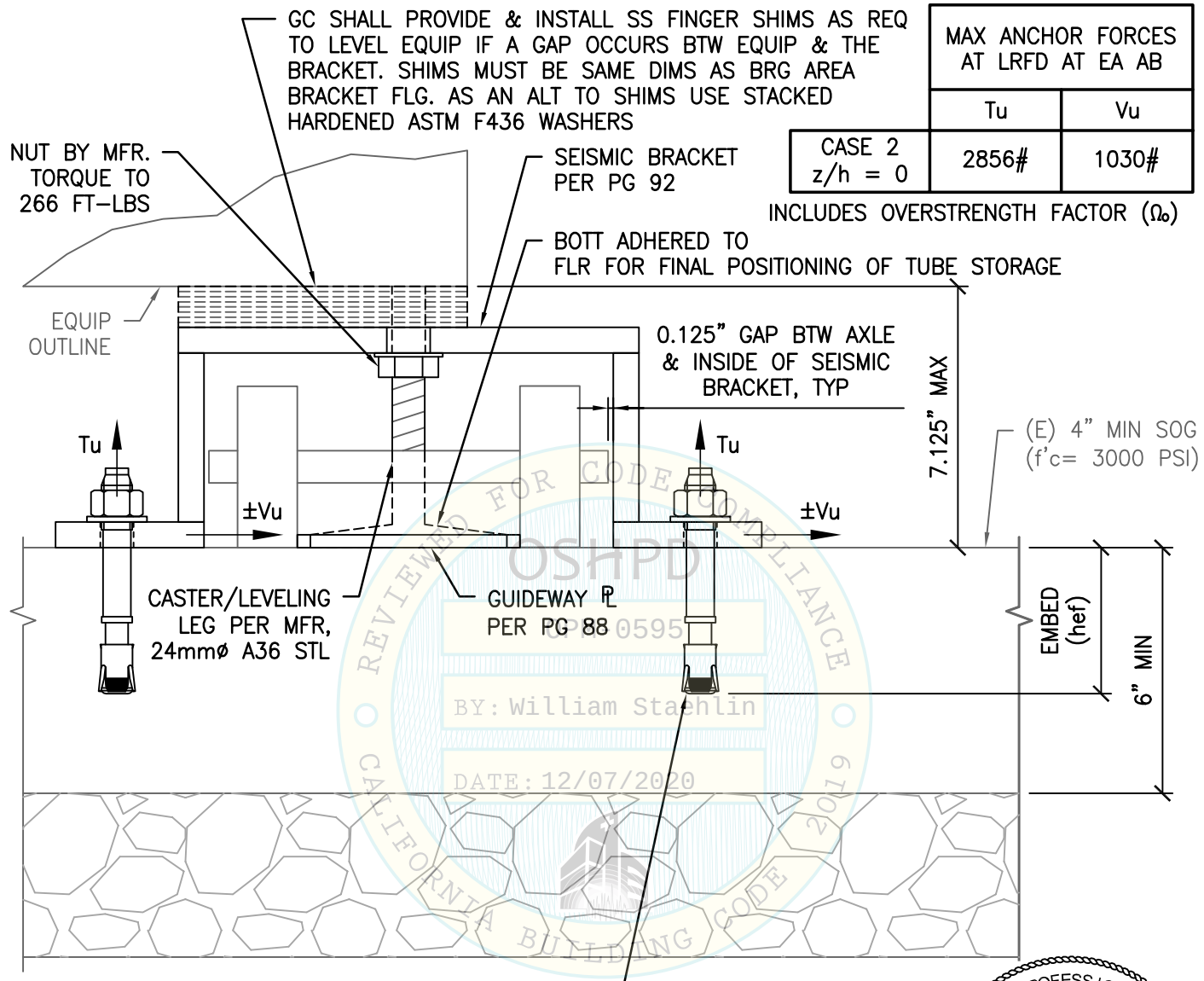
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



MAX ANCHOR FORCES AT LRFD AT EA AB		
	Tu	Vu
CASE 2 z/h = 0	2856#	1030#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)

USE 2- 0.75"ø HILTI KB-TZ 304 SS W/ 3.75" EMBEDMENT AT EA LEG OF EA SEISMIC BRACKET & 2- 0.75"ø HILTI HAS-R (ASTM F593 CW1 316 SS) AT EA SHAPED KEEPER ∠8x (∠8x NOT SHOWN). DO NOT LOCATE ANCHORS WITHIN 11.25" OF ADJ ANCHOR, UNO.

CASE 2 - SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 13: INPECO TUBE STORAGE MODULE (15,038 CAPACITY) SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
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Job No:	20064
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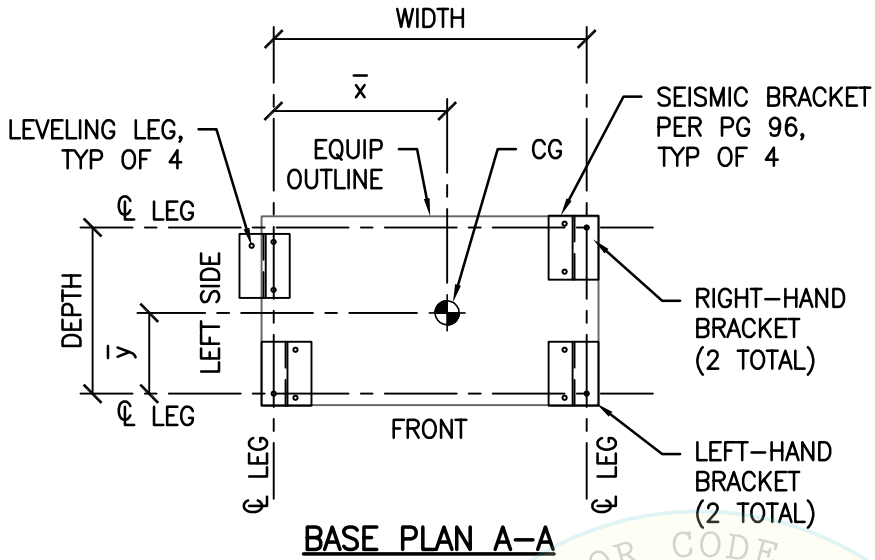
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

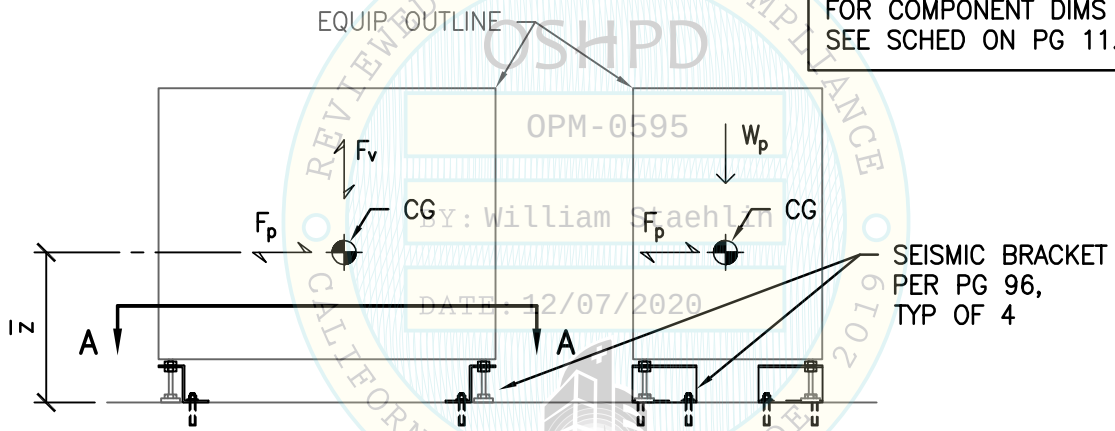


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	935#	1273#	461#
CASE 2 [2]	498#	835#	259#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.



FRONT ELEV

RIGHT SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 14: BULK INPUT MODULE
BASE PLAN & ELEVATIONS

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

Job No:	20064
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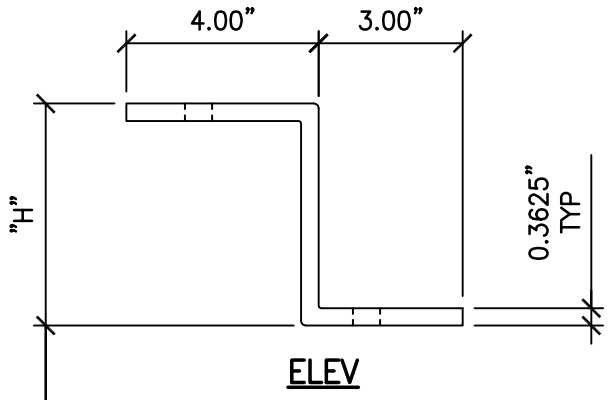
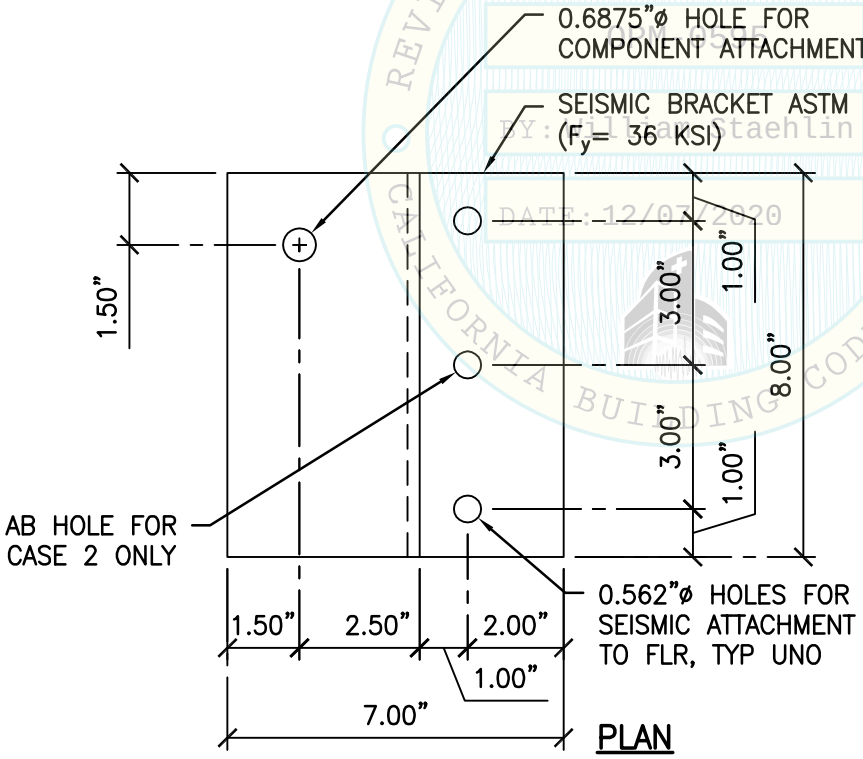


ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 97 & 98.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 95.
3. LEFT-HAND BRACKET SHOWN. SEE BASE PLAN A-A ON PG 95 FOR RIGHT-HAND BRACKET CONFIGURATION.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A:	"H" = 4.00" FOR 4.00" ≤ CLR ≤ 4.625"
BRACKET B:	"H" = 4.625" FOR 4.625" ≤ CLR ≤ 5.25"
BRACKET C:	"H" = 5.25" FOR 5.25" ≤ CLR ≤ 5.875"
BRACKET D:	"H" = 5.875" FOR 5.875" ≤ CLR ≤ 6.50"



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 875mm
B = 890mm
C = 906mm
D = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 14: BULK INPUT MODULE SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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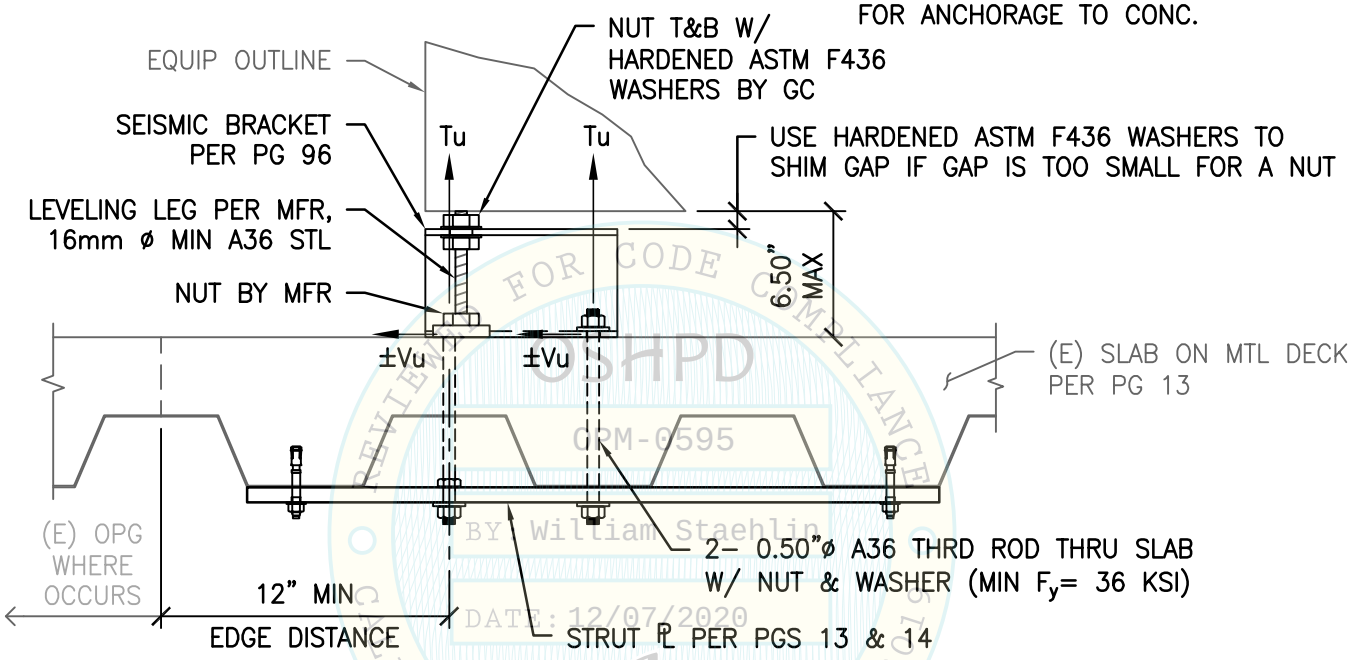
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h = 0	4712#	501#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 14: BULK INPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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Job No:	20064
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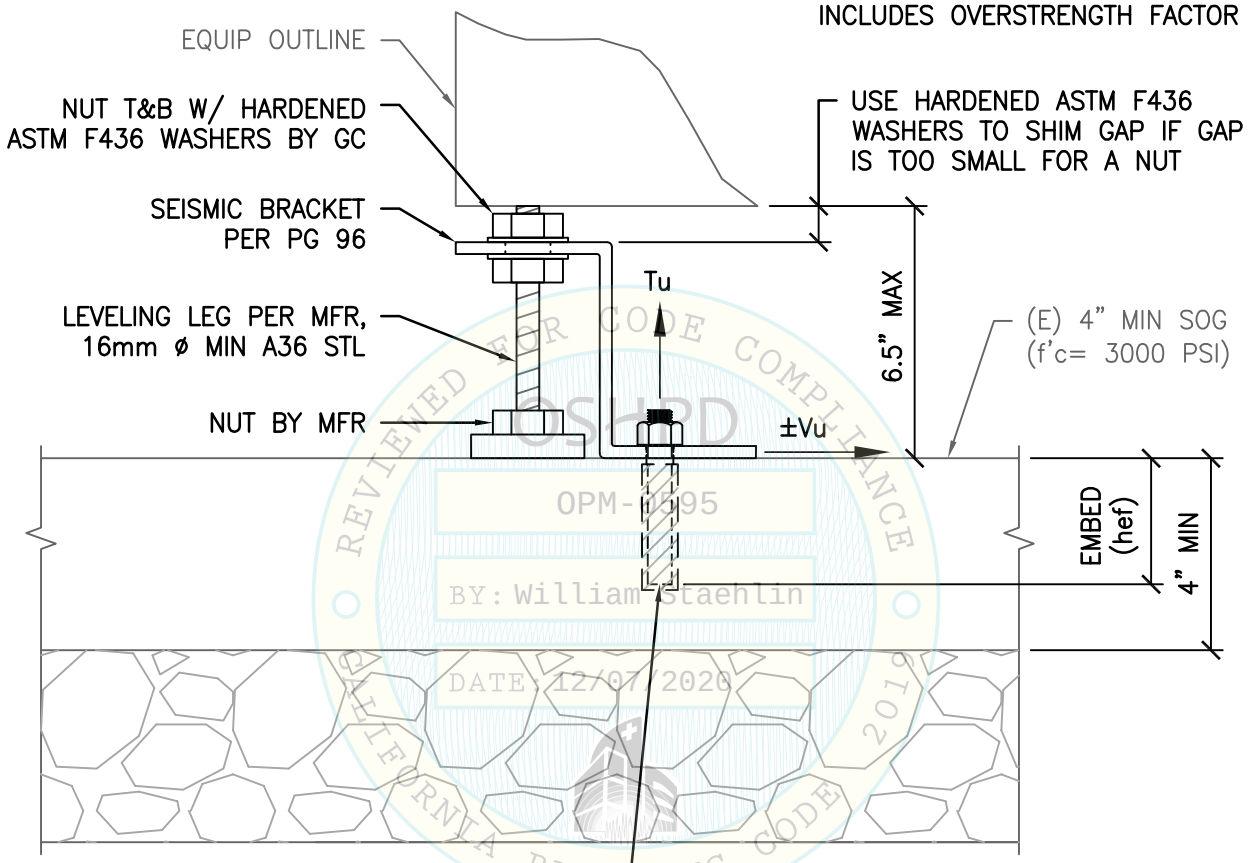
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1110#	399#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 14: BULK INPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
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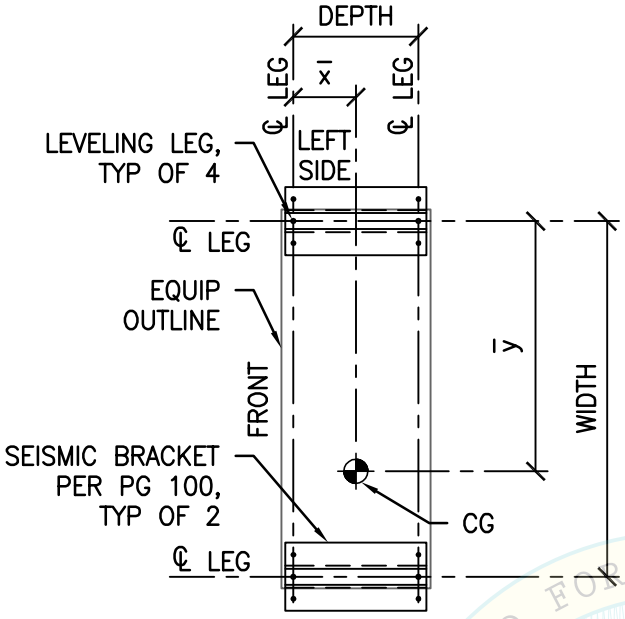
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

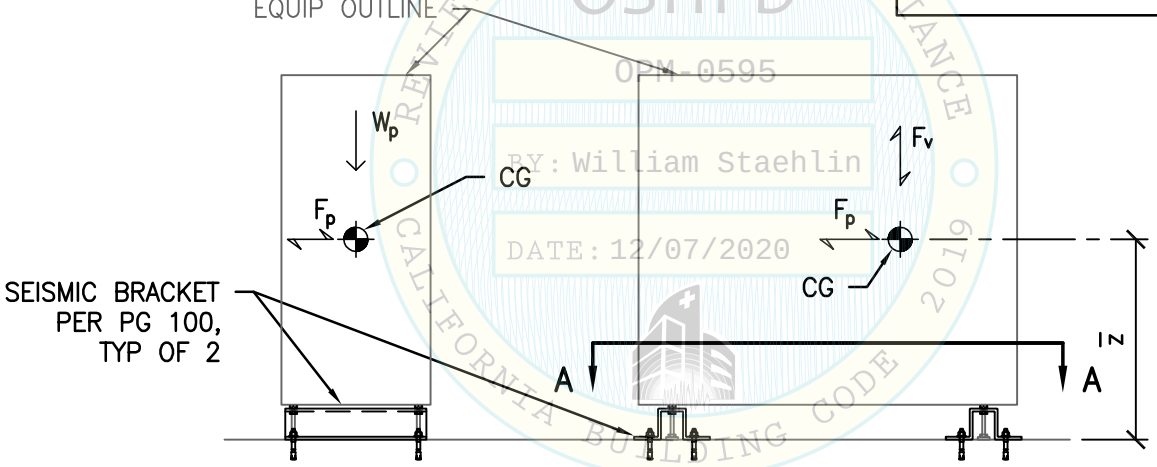


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	1583#	1863#	393#
CASE 2 [2]	867#	1147#	221#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.



RIGHT SIDE ELEV

FRONT ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 15 & 16: RACK INPUT / OUTPUT MODULES
BASE PLAN & ELEVATIONS

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

Job No:	20064
Date:	12/01/2020
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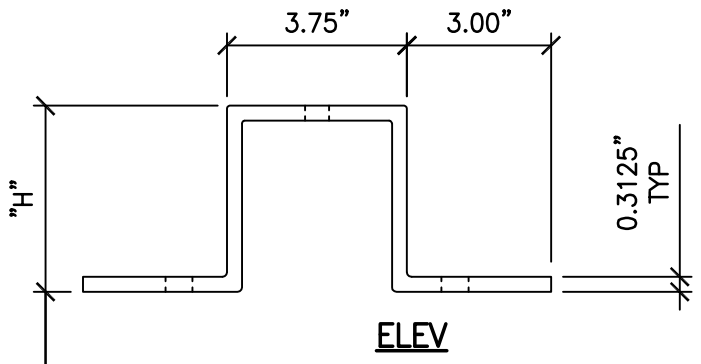
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

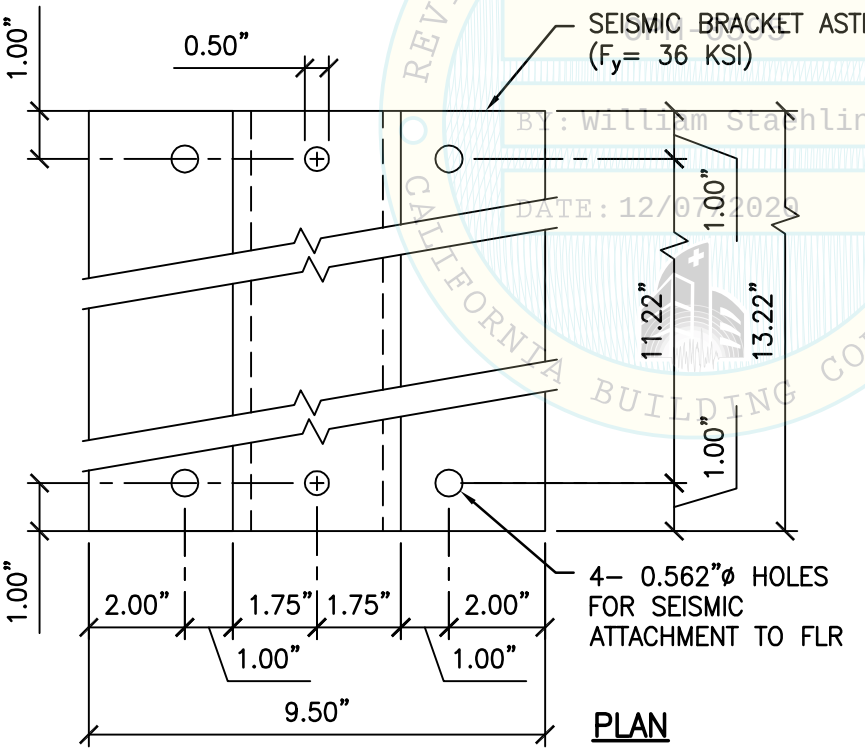


ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 101 & 102.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 99.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 2.625" FOR 2.625" ≤ CLR ≤ 3.625"
BRACKET B: "H" = 3.375" FOR 3.375" ≤ CLR ≤ 4.375"
BRACKET C: "H" = 4.125" FOR 4.125" ≤ CLR ≤ 5.125"



PLAN

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 885mm
B = 903mm
C = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 15 & 16: RACK INPUT / OUTPUT MODULES
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:	20064
Date:	12/01/2020
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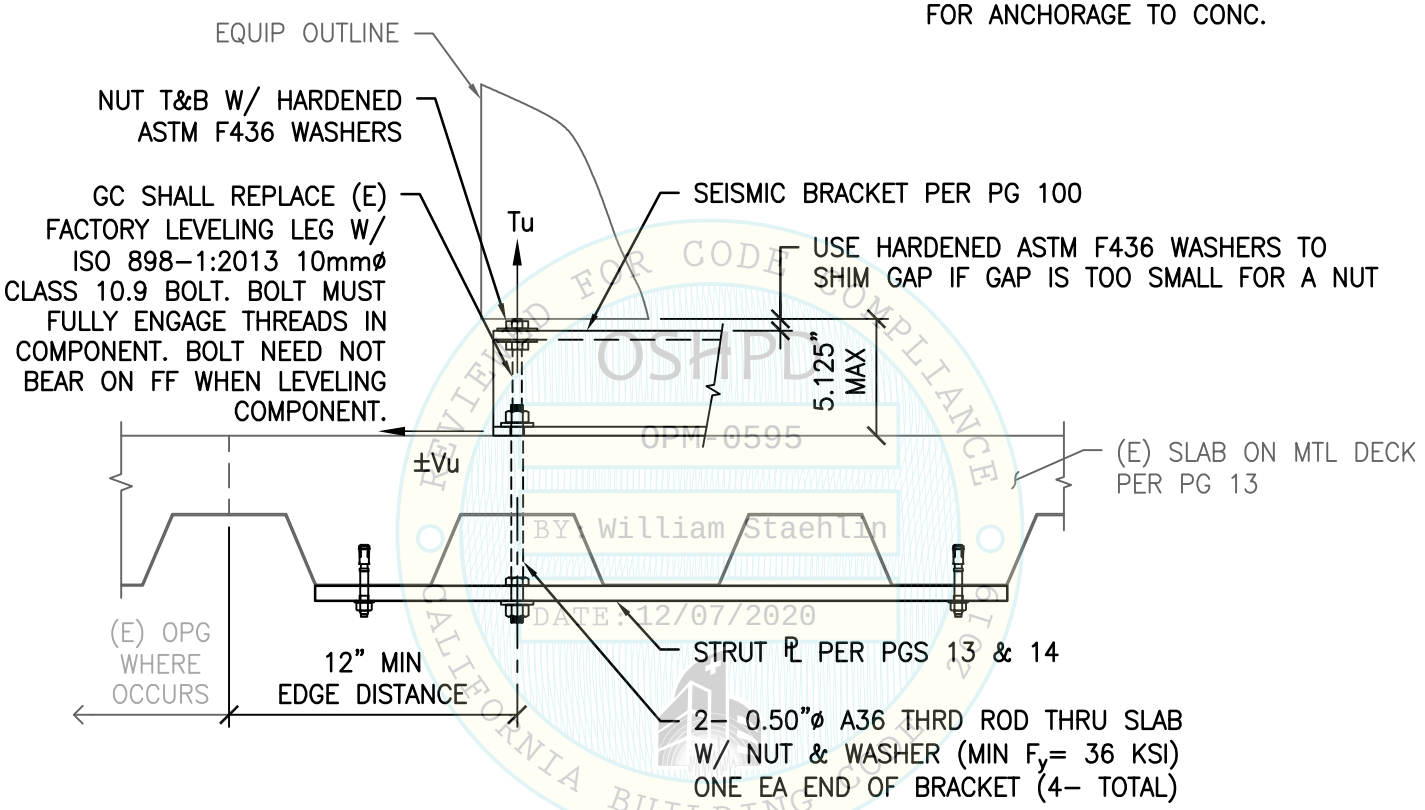
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	864#	110#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 - SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 15 & 16: RACK INPUT / OUTPUT MODULES SUPPORTS & ATTACHMENTS 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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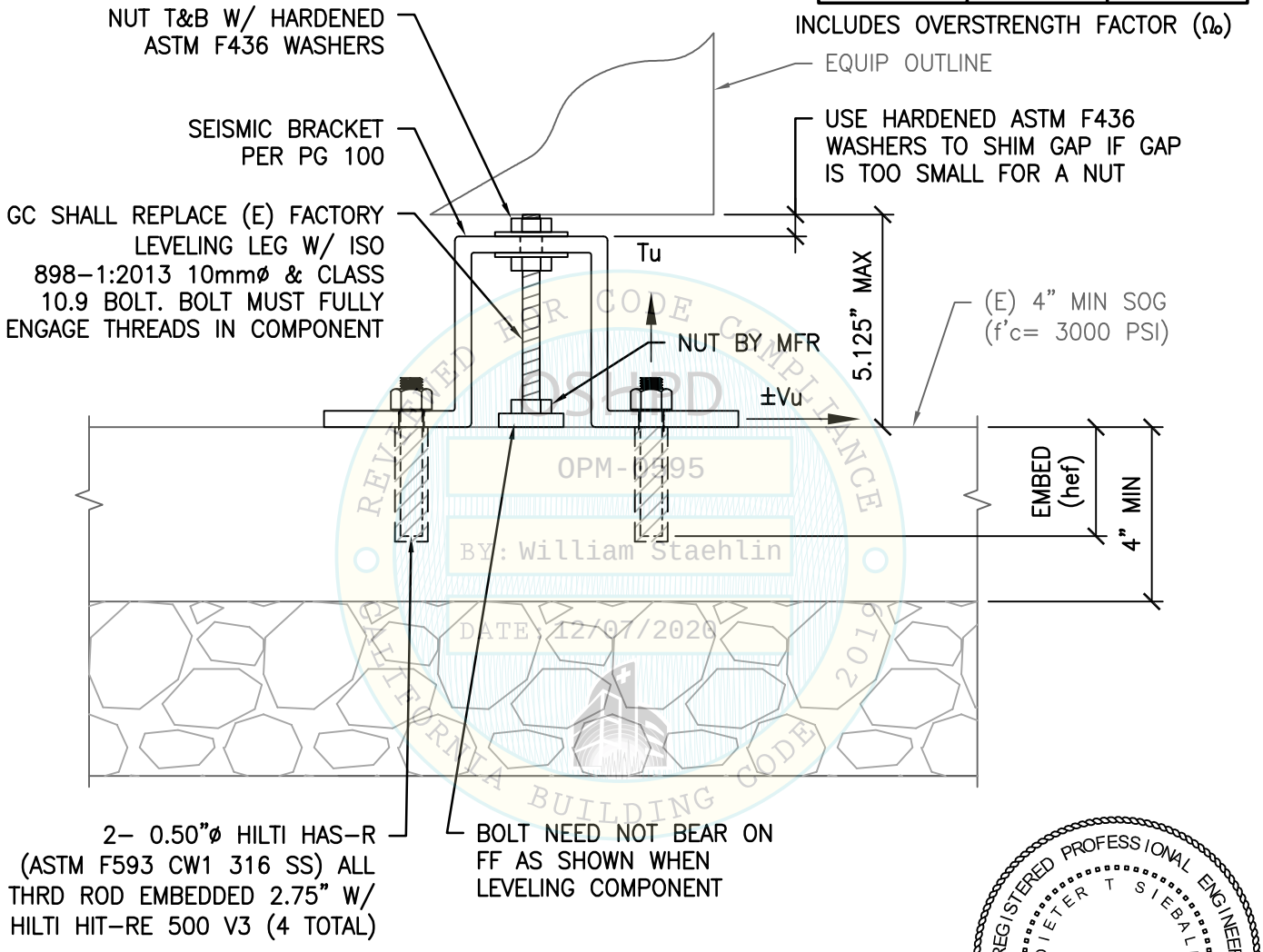
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	474#	62#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE
(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 15 & 16: RACK INPUT / OUTPUT MODULES SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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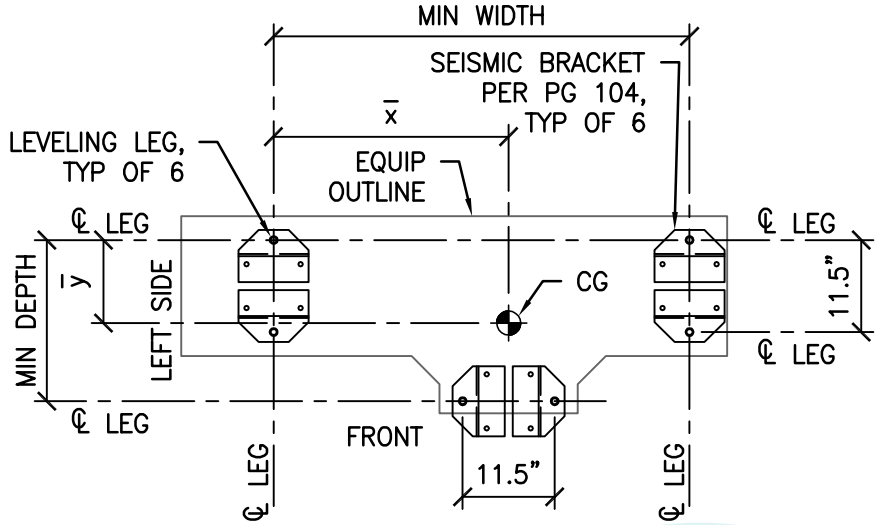
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

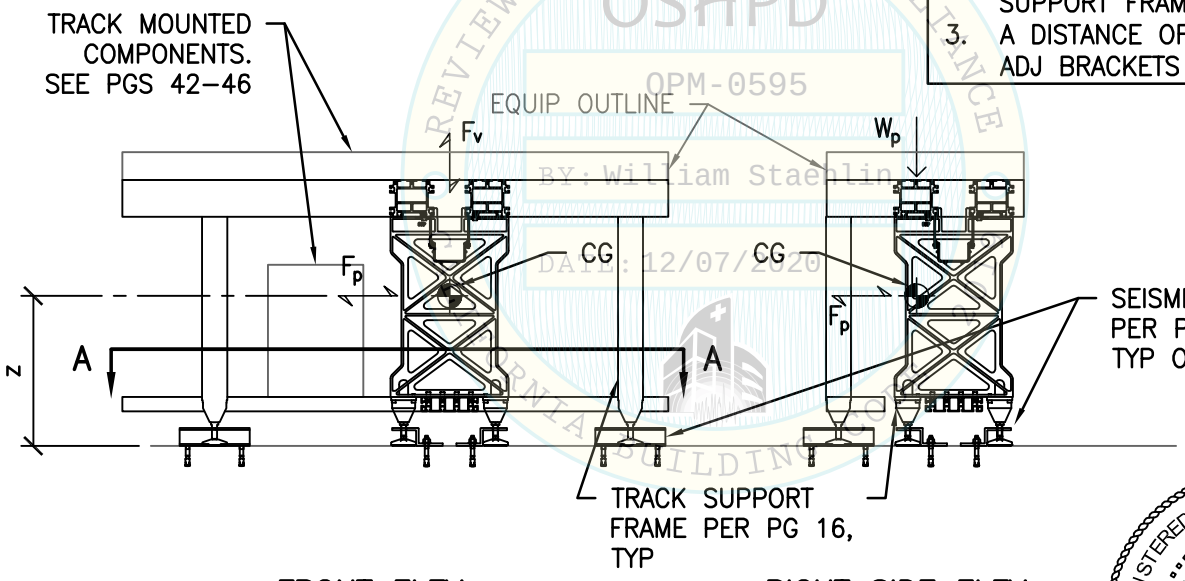


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	778#	1018#	275#
CASE 2 [2]	438#	509#	155#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. SEE PGS 16–18 FOR TYP TRACK SUPPORT FRAMES & T&B RAILS.
3. A DISTANCE OF 5.5" BTW AB OF ADJ BRACKETS IS ACCEPTABLE.



FRONT ELEV

RIGHT SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
BASE 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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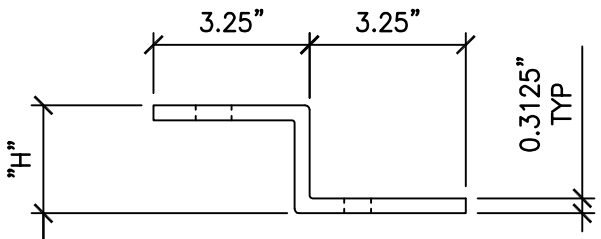
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

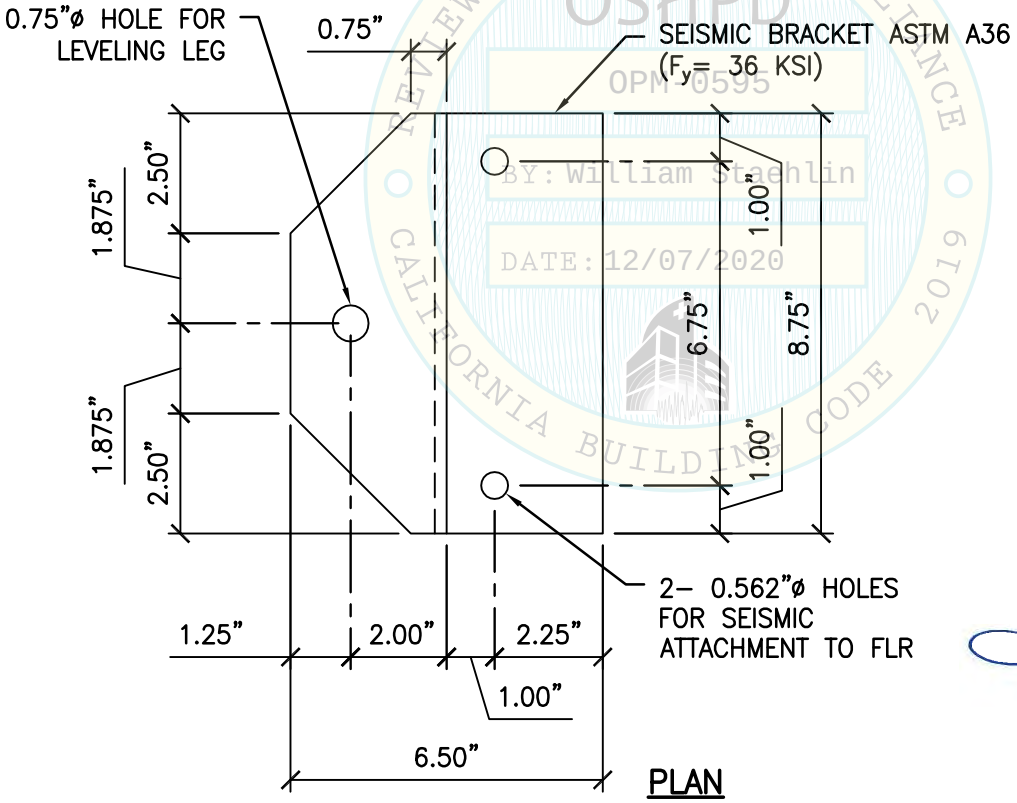


ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 105 & 106.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 103.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 1.75" FOR 1.75" ≤ CLR ≤ 3.00"
BRACKET B: "H" = 3.00" FOR 3.00" ≤ CLR ≤ 4.25"



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 888mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
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:	20064
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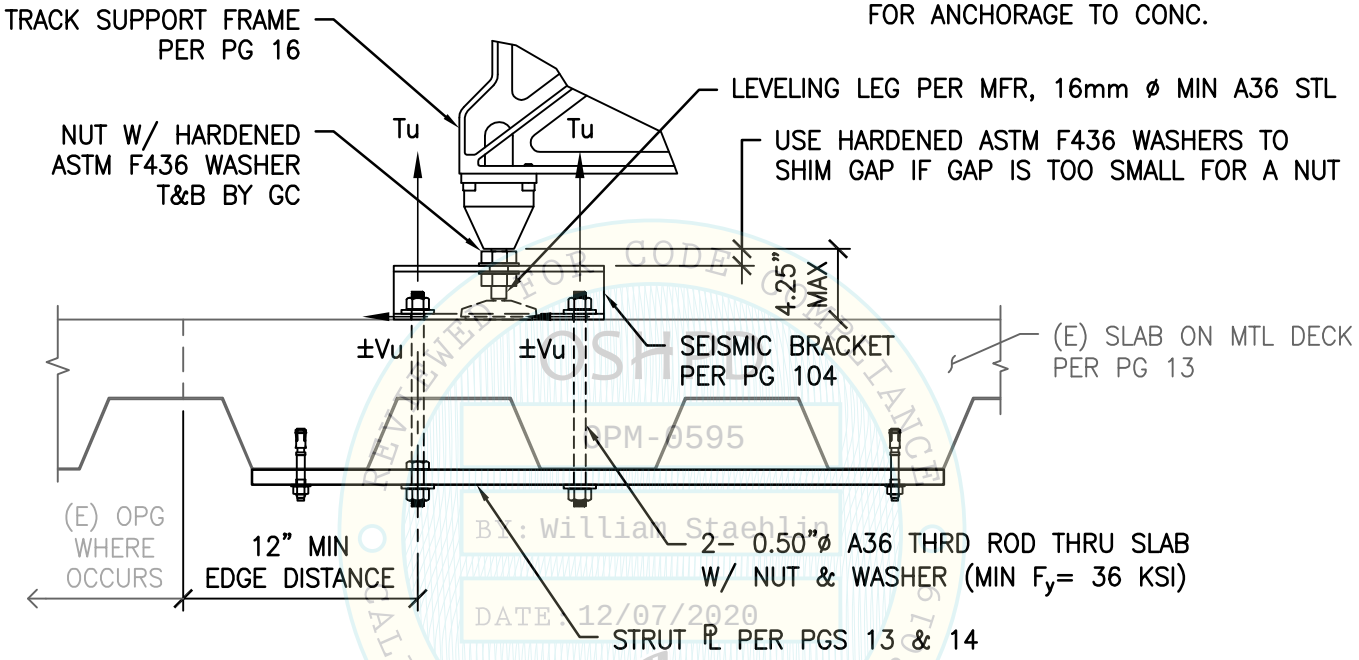
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	775#	639#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE
SUPPORTS & ATTACHMENTS 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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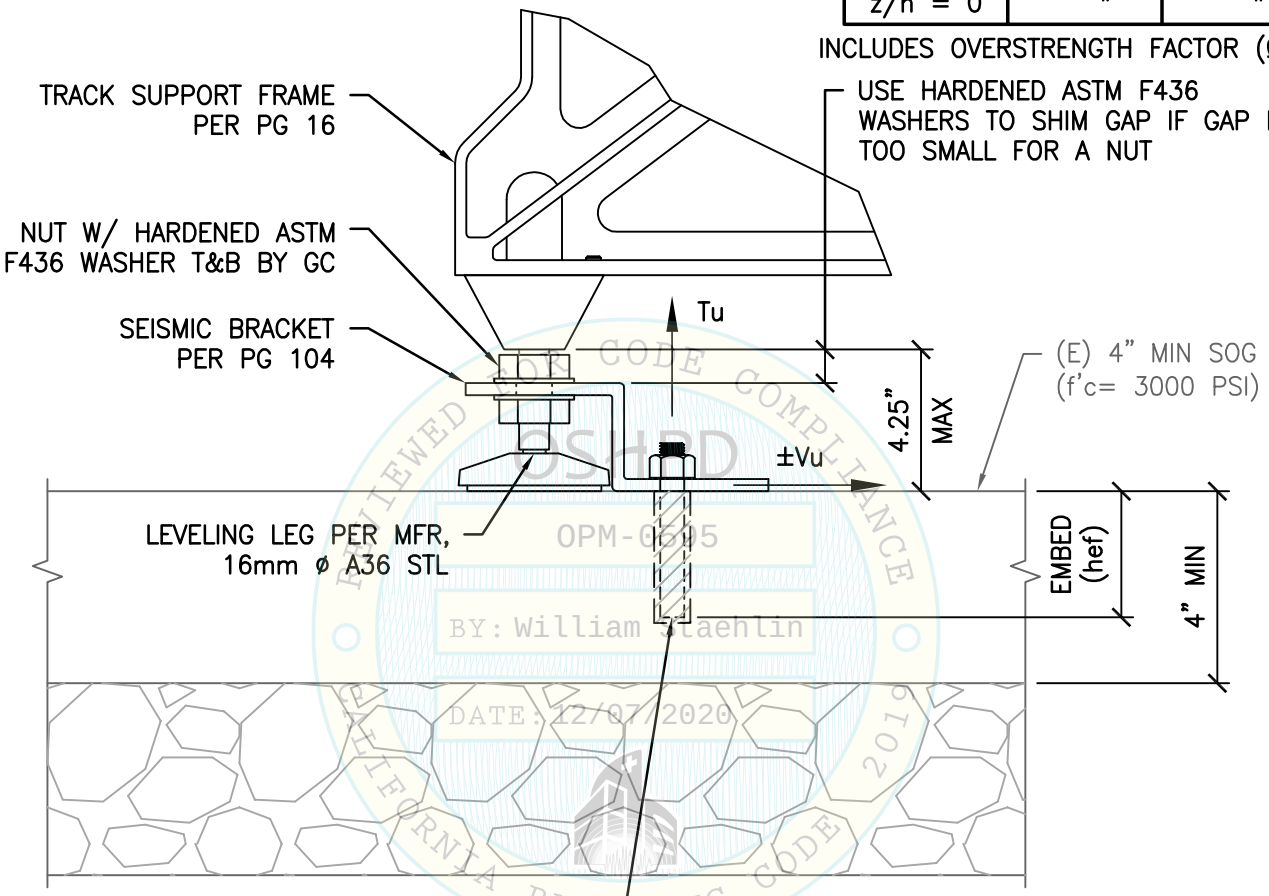
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	443#	104#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 18: T-TURN MODULE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
Page:	106 of 148

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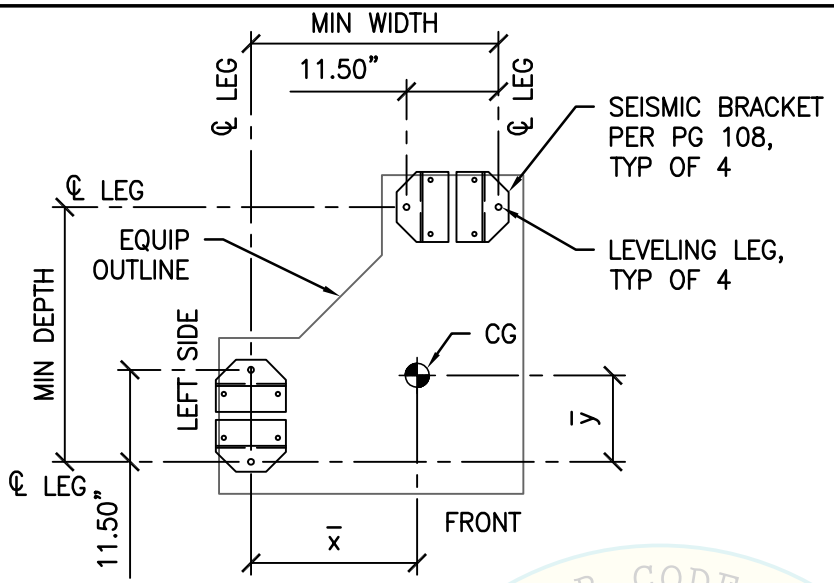
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

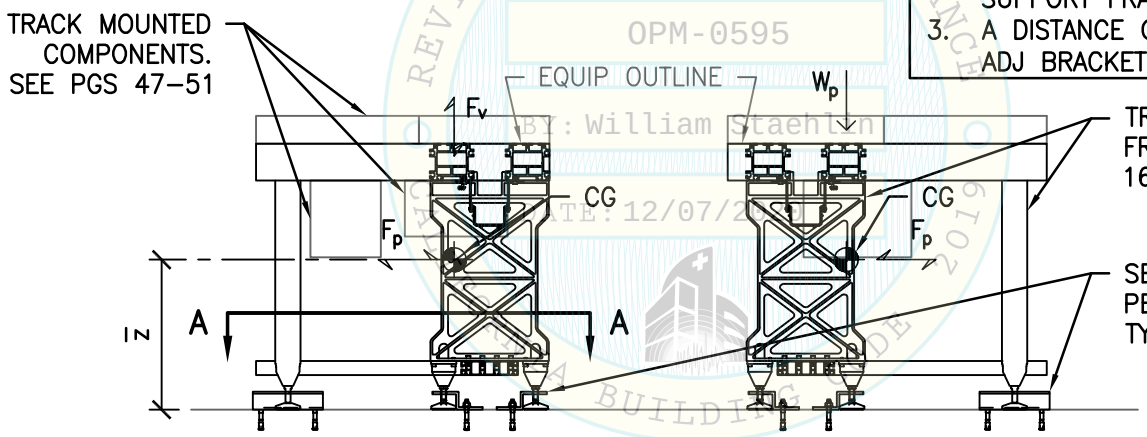


BASE PLAN A–A

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	1618#	1922#	281#
CASE 2 [2]	899#	987#	158#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTES:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. SEE PGS 16–18 FOR TYP TRACK SUPPORT FRAMES & T&B RAILS.
3. A DISTANCE OF 5.5" BTW AB OF ADJ BRACKETS IS ACCEPTABLE.



FRONT ELEV

RIGHT SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
BASE PLAN & ELEVATIONS

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

Job No:	20064
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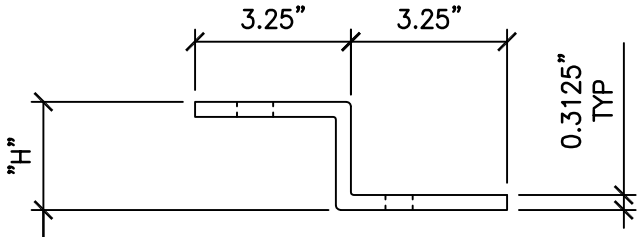
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

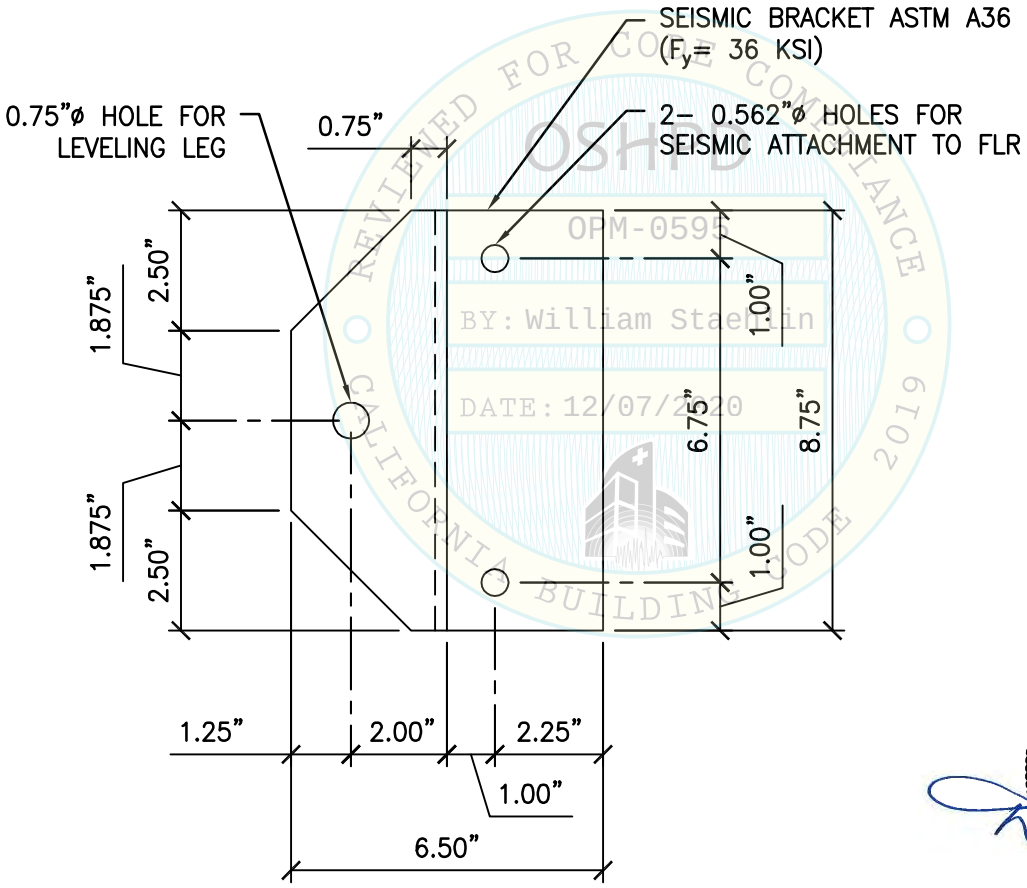


ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 109 & 110.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 107.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 2.25" FOR 2.25" ≤ CLR ≤ 4.50"
BRACKET B: "H" = 2.75" FOR 4.0" ≤ CLR ≤ 5.0"



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 914mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
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:	20064
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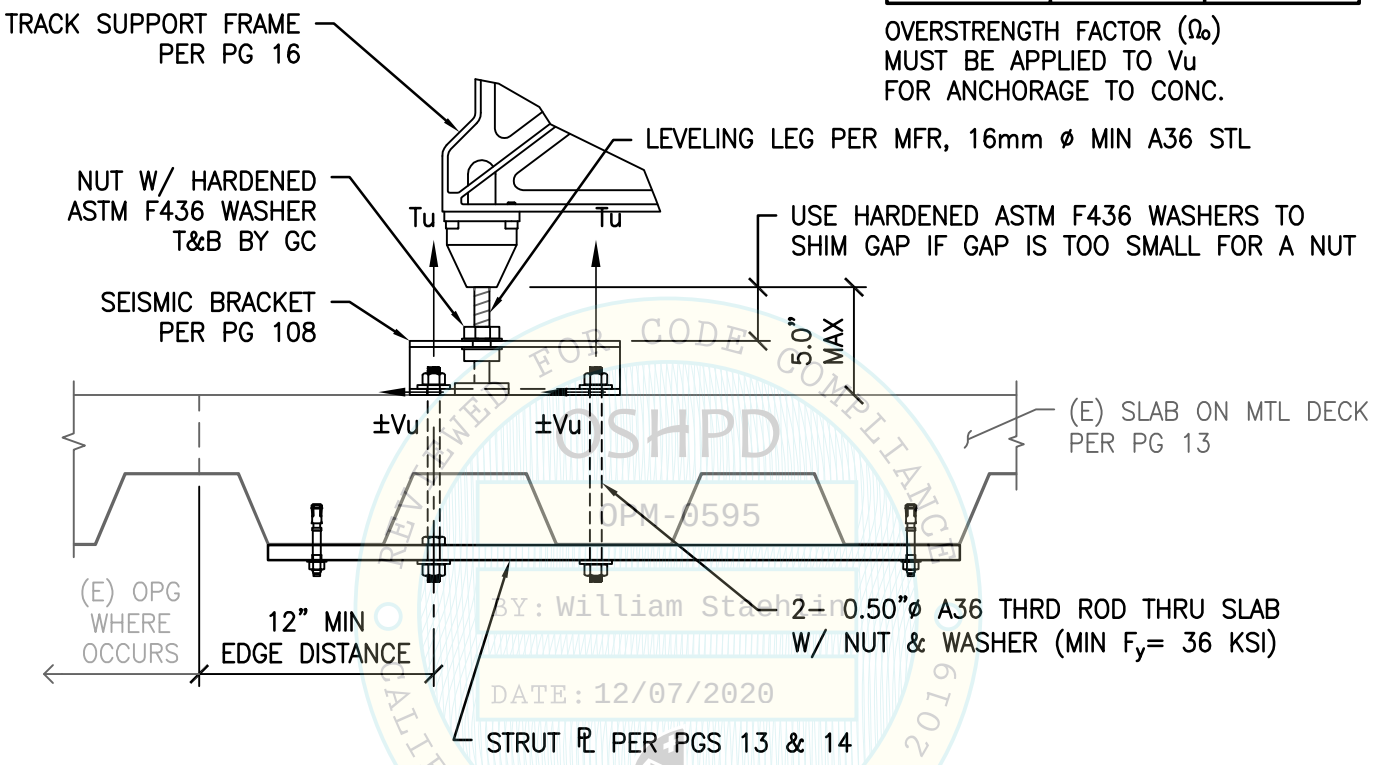
	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	2066#	390#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE
SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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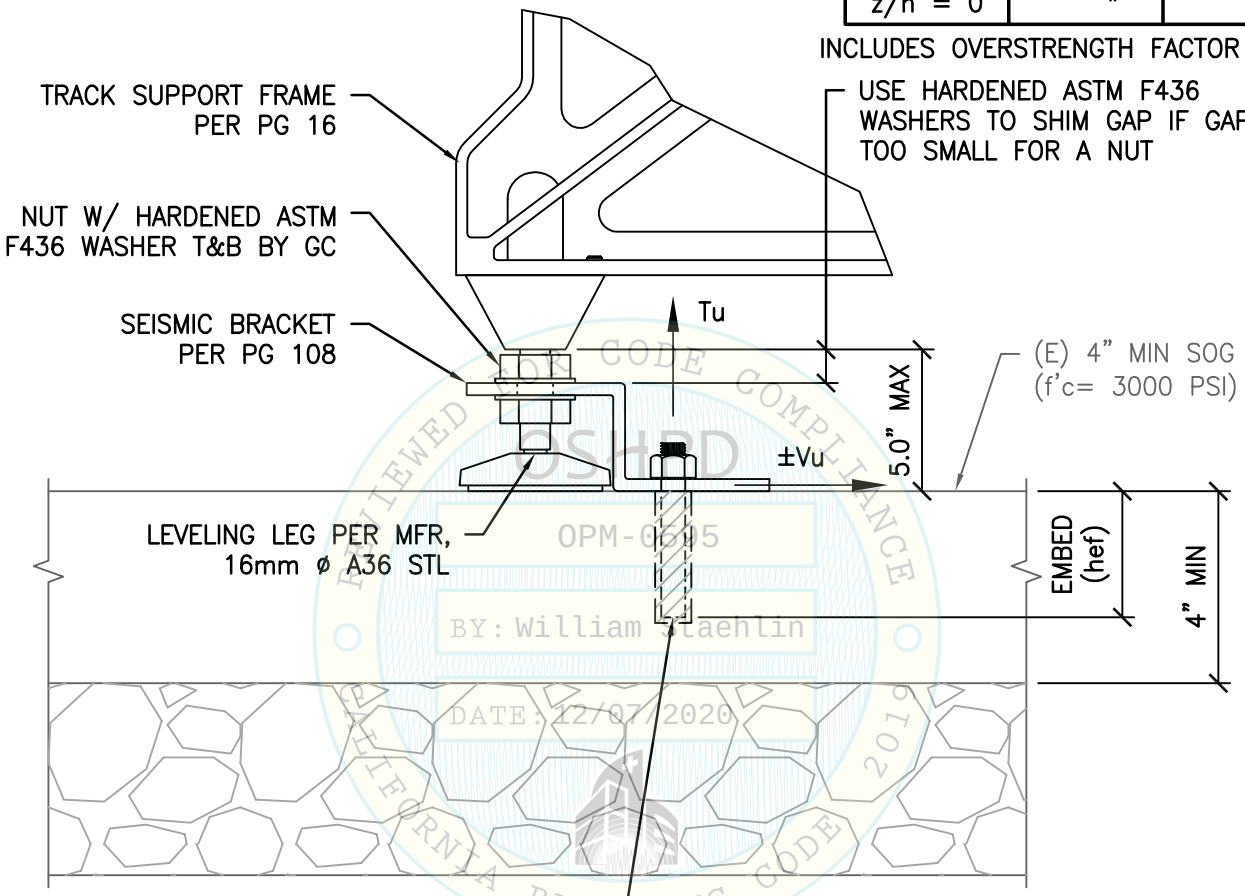
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1019#	241#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 19: L-TURN MODULE SUPPORTS & ATTACHMENTS 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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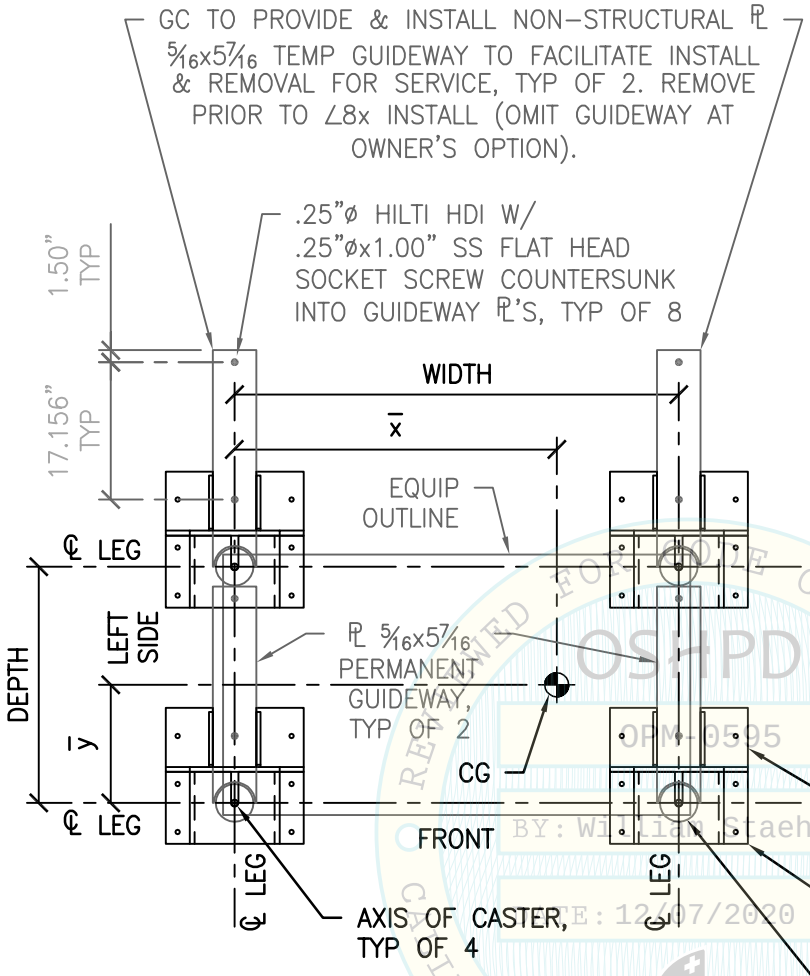
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

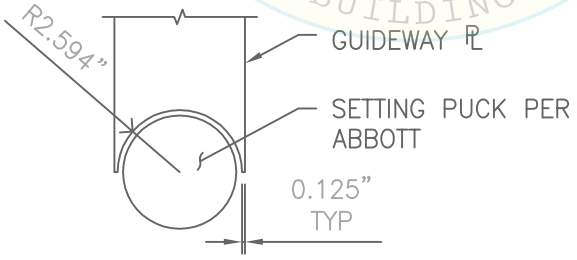


BASE PLAN A-A

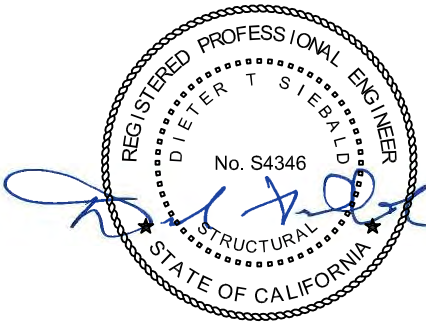
	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1 [3]	3995#	5575#	2180#
CASE 2 [2]	5070#	6649#	2726#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

NOTE:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. GUIDEWAY PL'S ARE FOR EQUIP PLACEMENT & NOT PART OF THE SEISMIC RESTRAINT.



GUIDEWAY PL AT SETTING PUCK



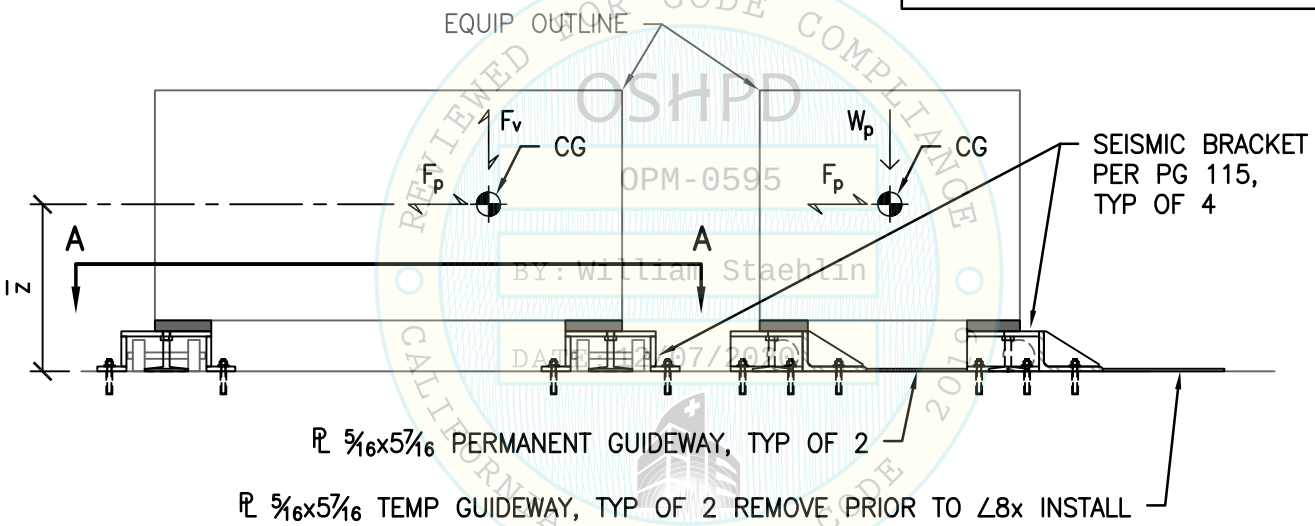
NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) BASE PLAN

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

Job No:	20064
Date:	12/01/2020
Page:	111 of 148

NOTE:
1. FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PG 11.
2. GUIDEWAY ℄'S ARE FOR EQUIP PLACEMENT & NOT PART OF THE SEISMIC RESTRAINT.



FRONT ELEV

RIGHT SIDE ELEV

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

NOT SEOR

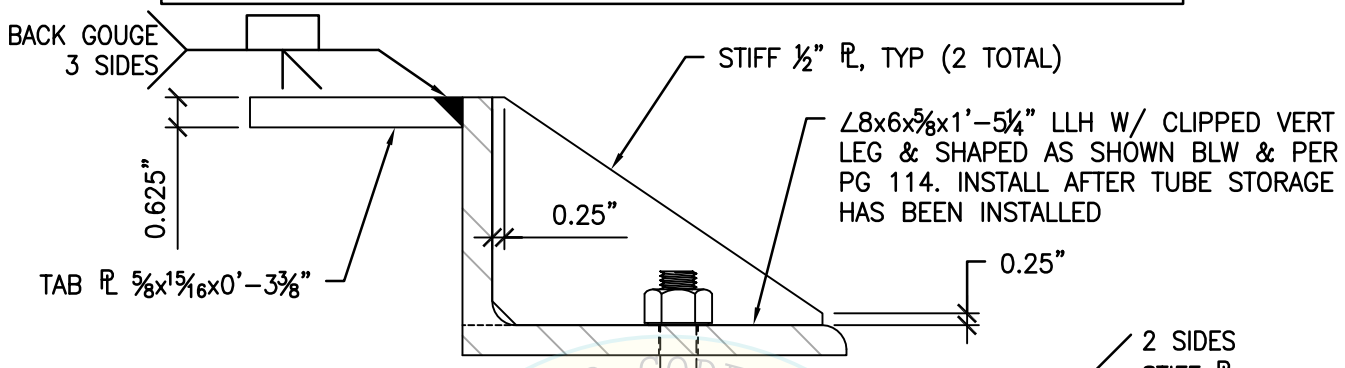
SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) ELEVATIONS

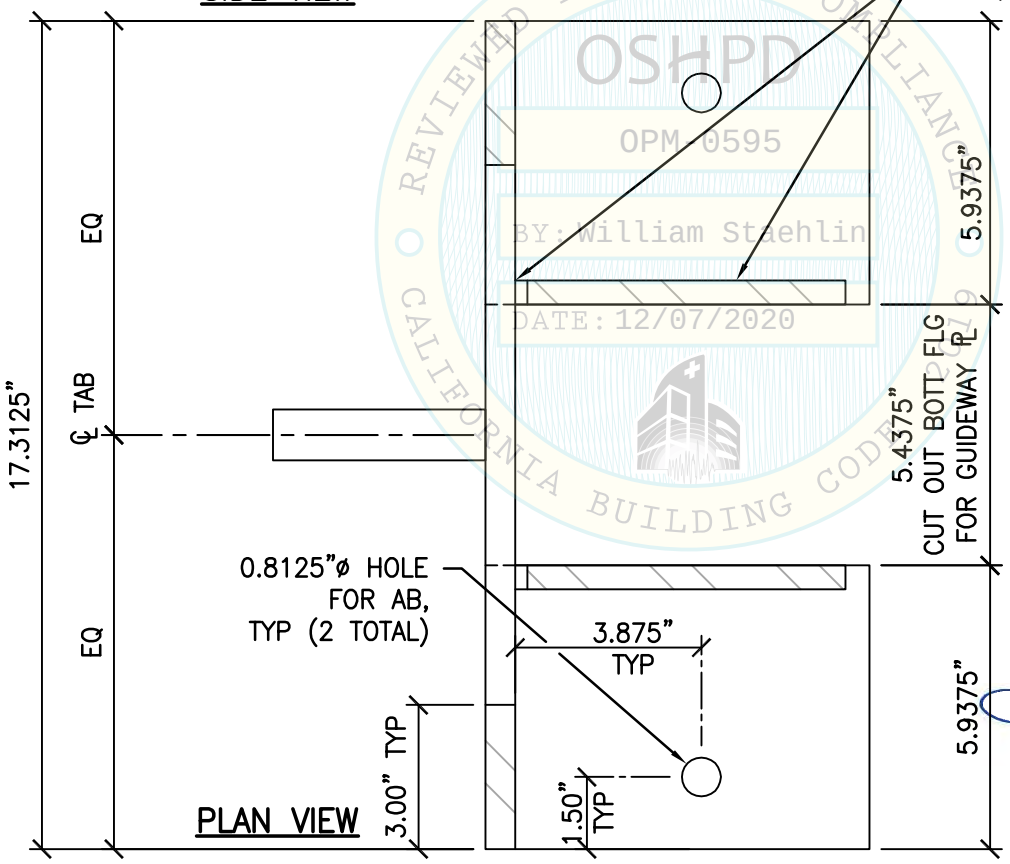
CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Job No:	20064
Date:	12/01/2020
Page:	112 of 148

ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 116 & 117.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 111.
3. SEE PG 7 FOR WELDING NOTES.
4. SEE PG 114 FOR MORE INFO.
5. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.





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

NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) SHAPED ANGLE DETAIL

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

Job No:	20064
Date:	12/01/2020
Page:	113 of 148

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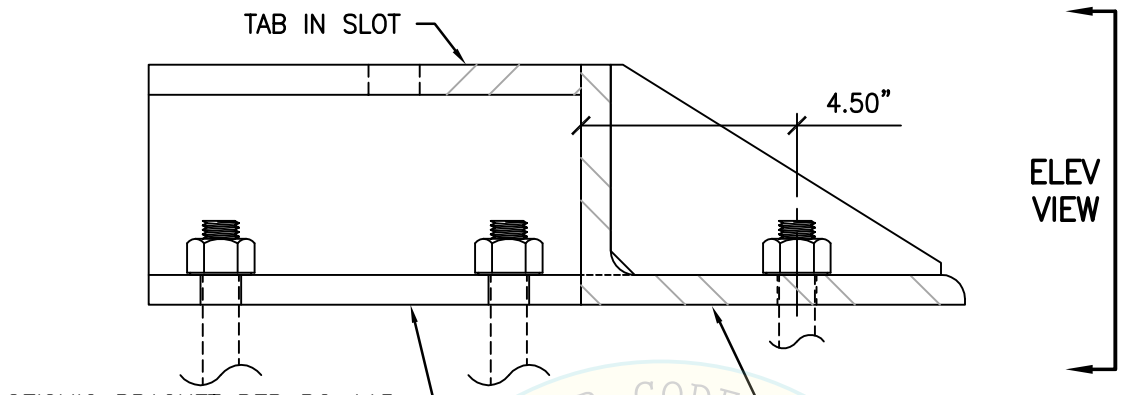
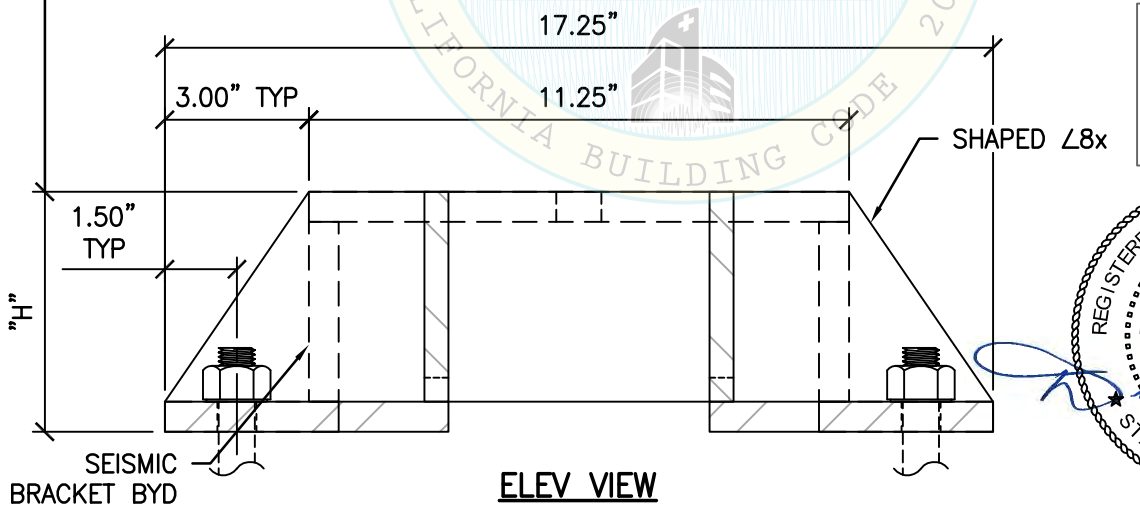
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 116 & 117.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 111.
3. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 4.625" FOR 4.625" ≤ CLR ≤ 6.00"
BRACKET B: "H" = 5.875" FOR 5.875" ≤ CLR ≤ 7.25"



FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 891mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) SHAPED ANGLE 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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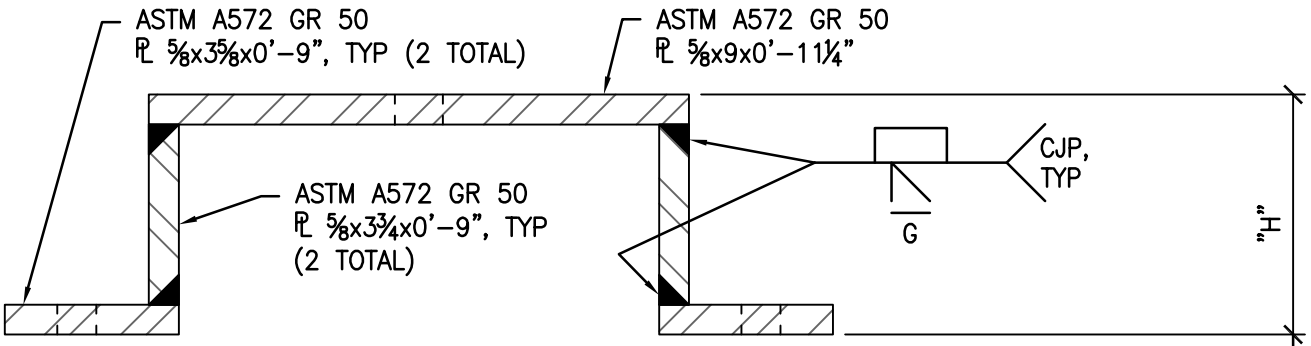
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



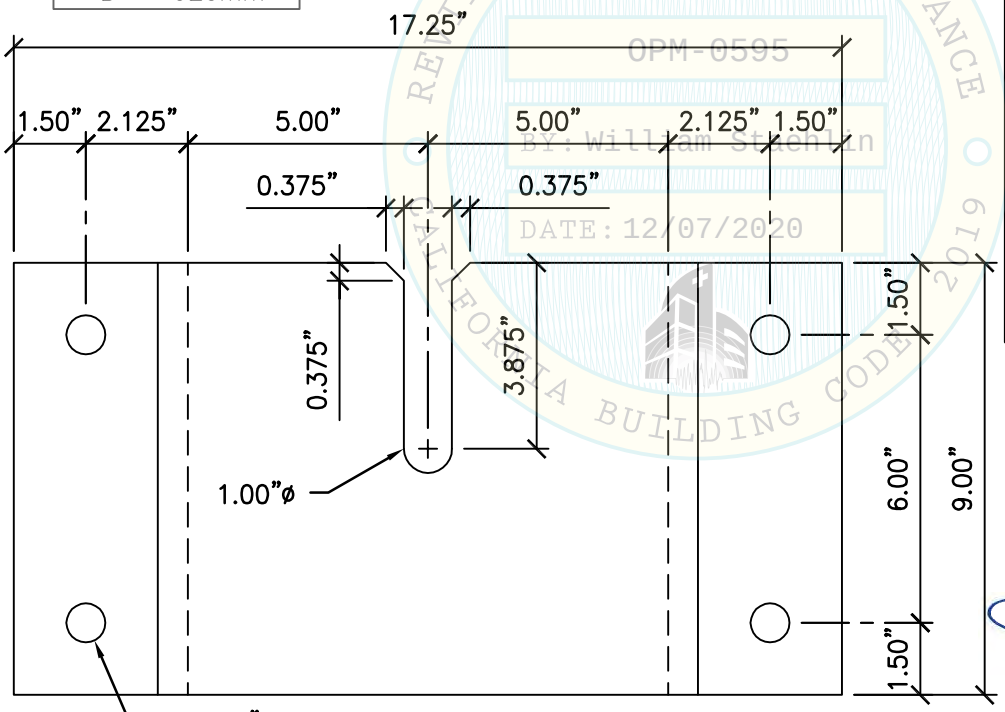
ELEV

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

FOR ABBOTT USE:
MAX TRACK HT
PER BRACKET
A = 891mm
B = 920mm

BRACKET A: "H" = 4.625" FOR 4.625" ≤ CLR ≤ 6.00"
BRACKET B: "H" = 5.875" FOR 5.875" ≤ CLR ≤ 7.25"

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 116 & 117.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 111.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



PLAN

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

NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) 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:	20064
Date:	12/01/2020
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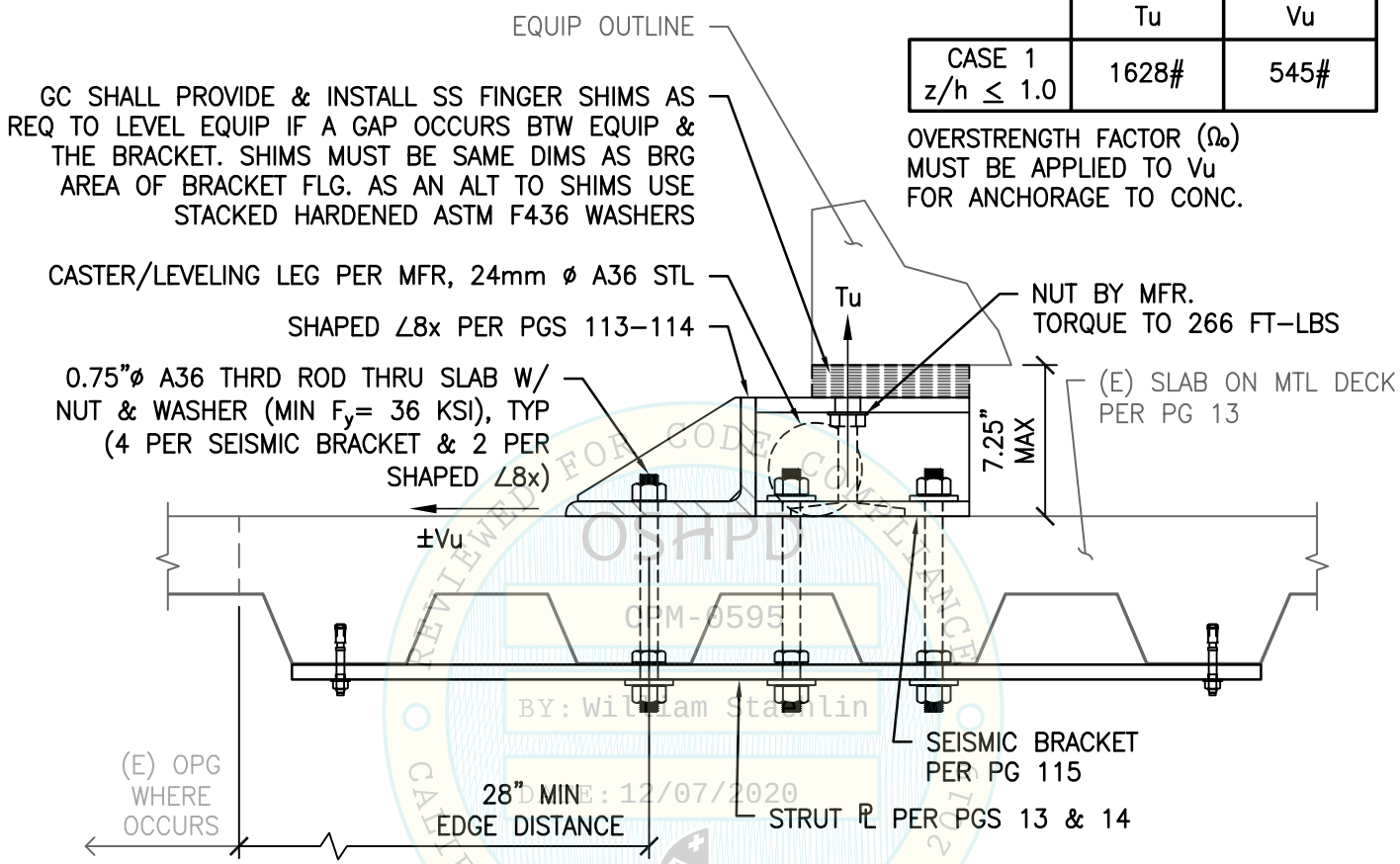
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	1628#	545#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



NOTE:
1. GUIDEWAY PL'S NOT SHOWN FOR CLARITY.

CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) SUPPORTS & ATTACHMENTS DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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Job No:	20064
Date:	12/01/2020
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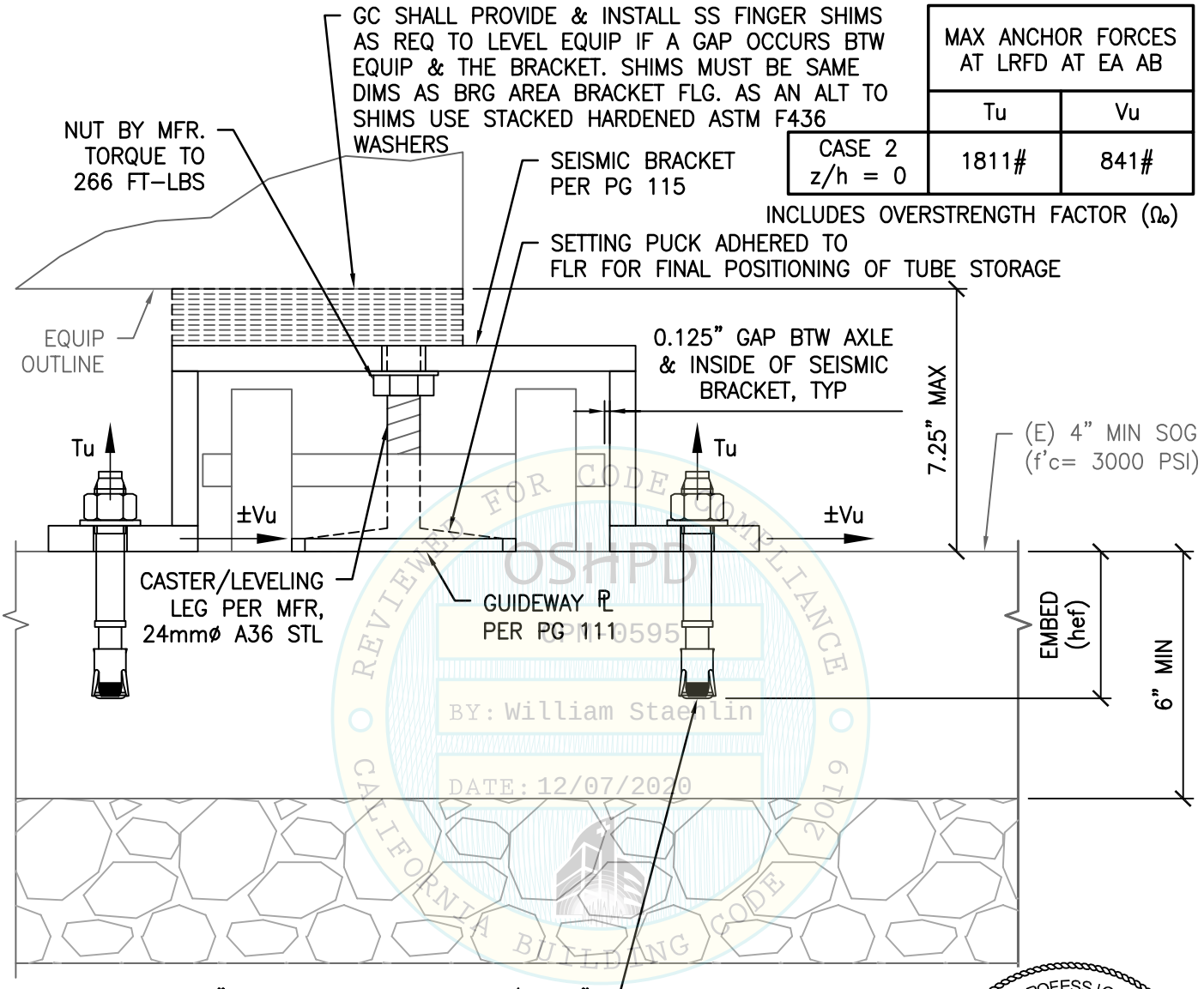
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



MAX ANCHOR FORCES AT LRFD AT EA AB		
	Tu	Vu
CASE 2 z/h = 0	1811#	841#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)

USE 2- 0.75"ø HILTI KB-TZ 304 SS W/ 3.75" EMBEDMENT AT EA LEG OF EA SEISMIC BRACKET & 2- 0.75"ø HILTI HAS-R (ASTM F593 CW1 316 SS) AT EA SHAPED KEEPER ∠8x (∠8x NOT SHOWN). DO NOT LOCATE ANCHORS WITHIN 11.25" OF ADJ ANCHOR, UNO.

CASE 2 - SLAB ON GRADE

(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 20: INPECO TUBE STORAGE MODULE (9,000 TUBE CAPACITY) SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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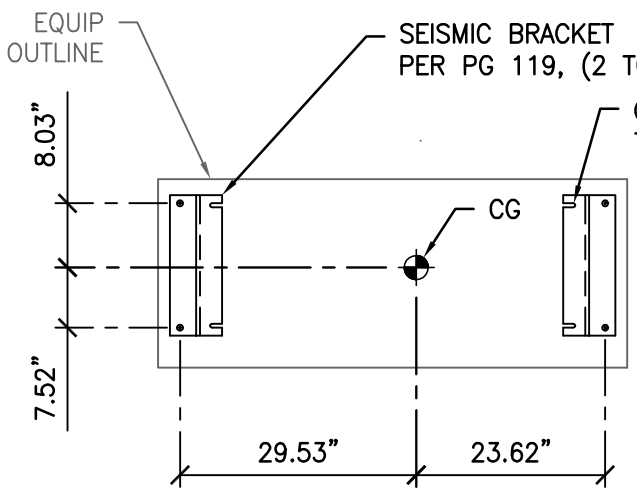
C:\Users\camachom\appdata\local\temp\AcPublish_1280\S1.dwg Time:Nov30,2020-11:36am Login:camachom Dimscale:1 LTScale:6

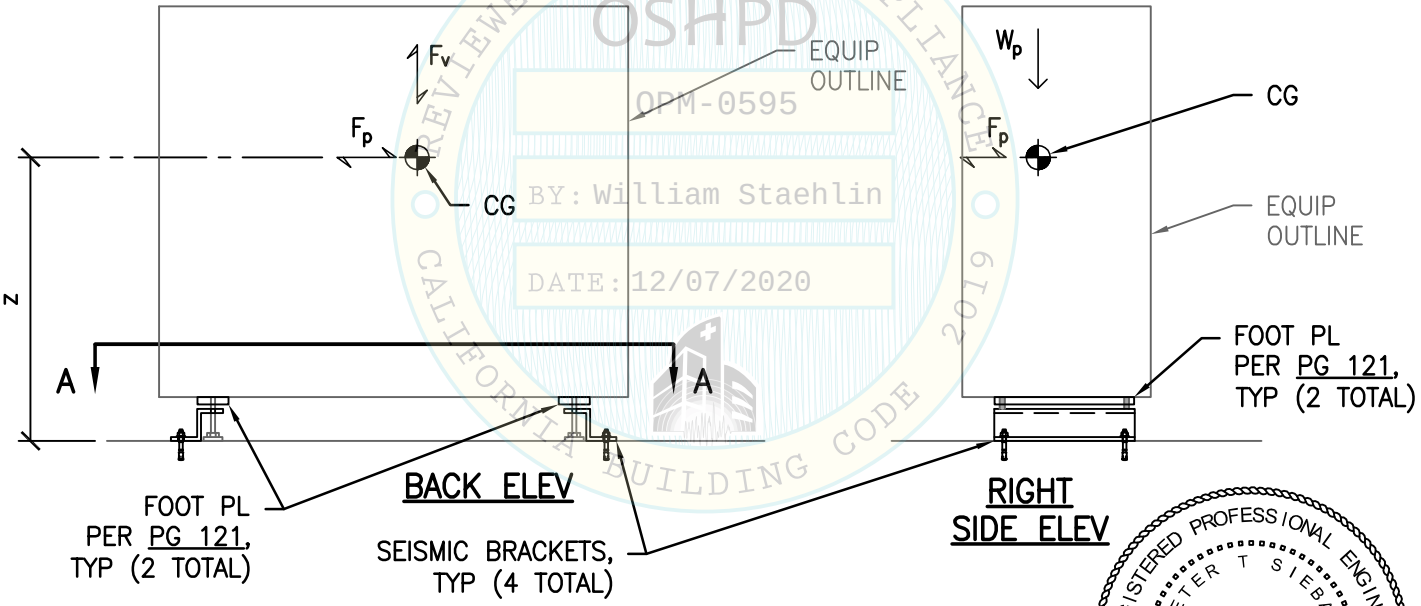
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	Tu, max	Cu, max	Vu, max
CASE 1[3]	553#	711#	228#
CASE 2[2]	301#	458#	128#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.

BASE PLAN A–A



BACK ELEV

RIGHT SIDE ELEV

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PAGE 11.

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE PLAN & ELEVATIONS

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

Job No:	20064
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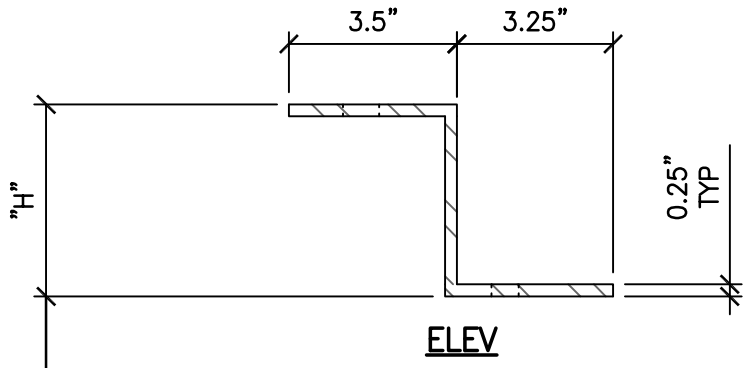
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

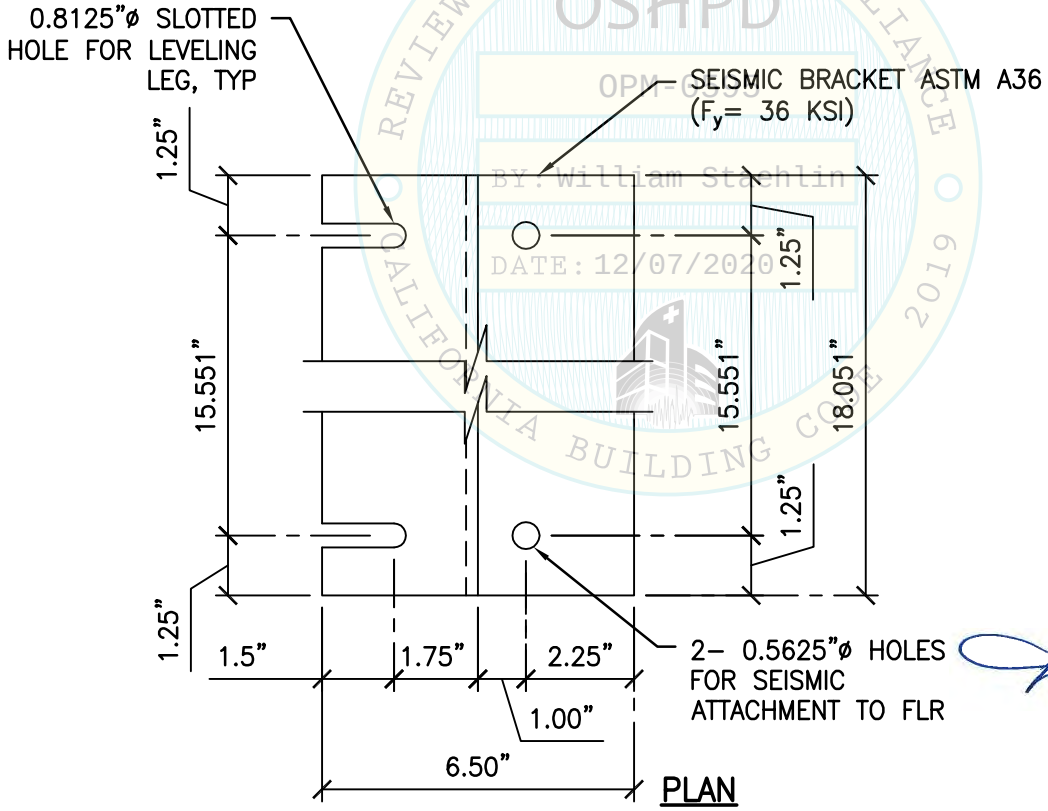


ELEV

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 122 THROUGH 124.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 118.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.

"H" VARIES TO ACCOMMODATE VERTICAL ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT AS SHOWN ON PG 120 FOR THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

BRACKET A: "H" = 3.460" FOR 3.460" ≤ CLR ≤ 5.50"
BRACKET B: "H" = 5.50" FOR 5.50" ≤ CLR ≤ 7.52"



PLAN

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 879mm
B = 920mm

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE SEISMIC BRACKET DETAILS

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

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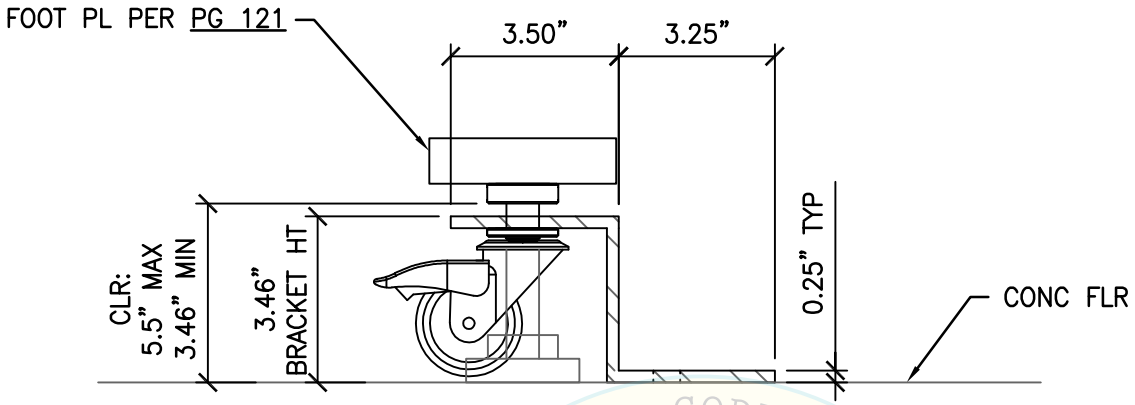
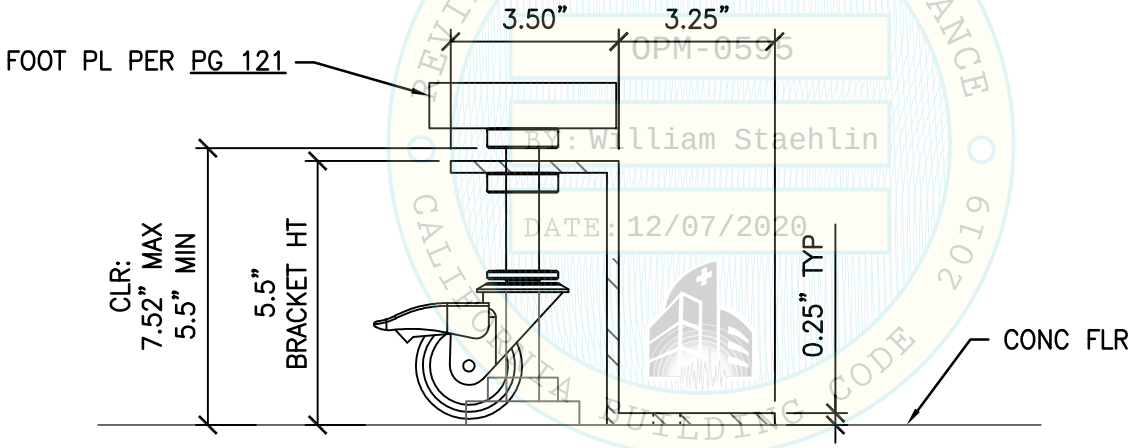


BRACKET A–ELEV



BRACKET B–ELEV

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE
SEISMIC BRACKET ELEVATIONS

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

Job No:	20064
Date:	12/01/2020
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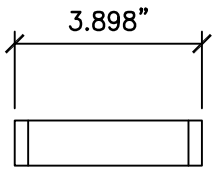
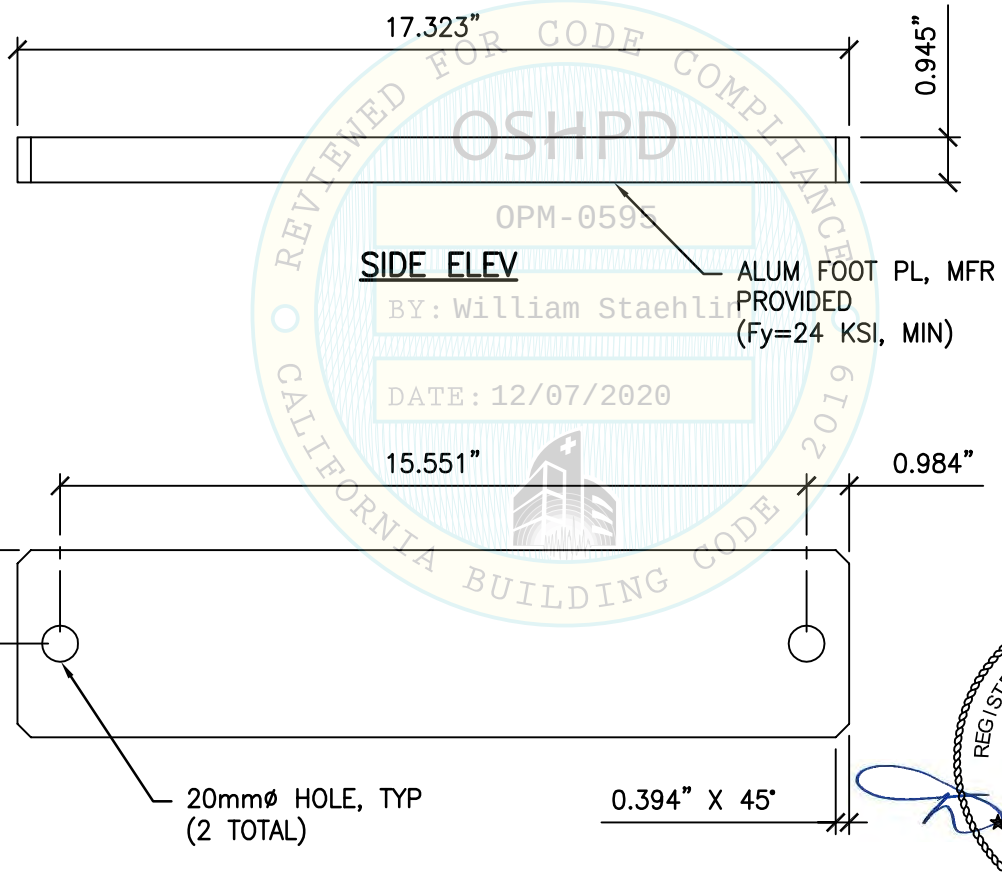
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



FRONT ELEV



SIDE ELEV

TOP VIEW

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE MANUFACTURER FOOT PLATE

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

Job No:	20064
Date:	12/01/2020
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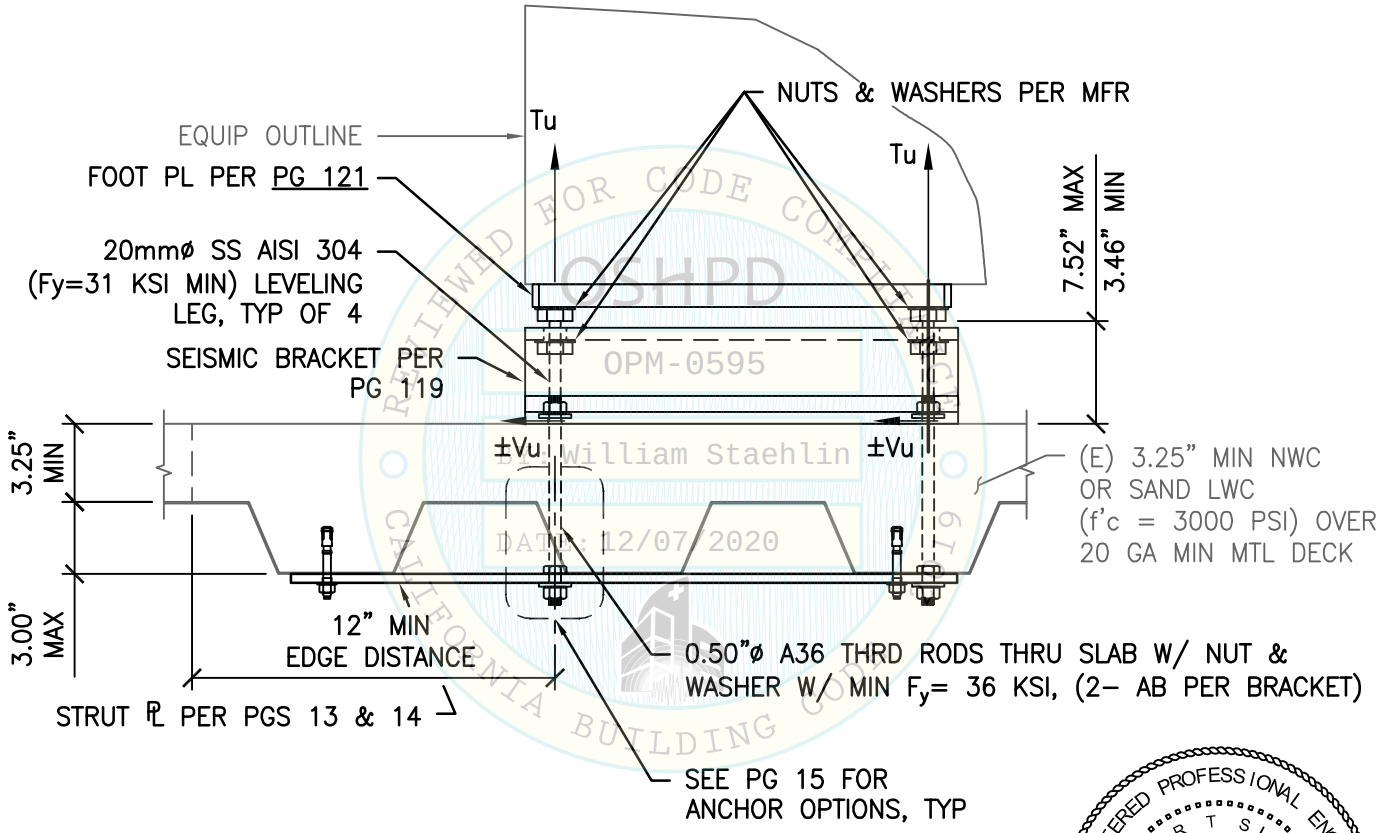
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. DBL NUTS AT STRUT ARE ONLY PERMITTED TO OCCUR AT ANCHOR RODS PASSING THRU HIGH FLUTES.
2. CASTER NOT SHOWN FOR CLARITY

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 z/h ≤ 1.0	806#	228#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE SUPPORTS & ATTACHMENTS 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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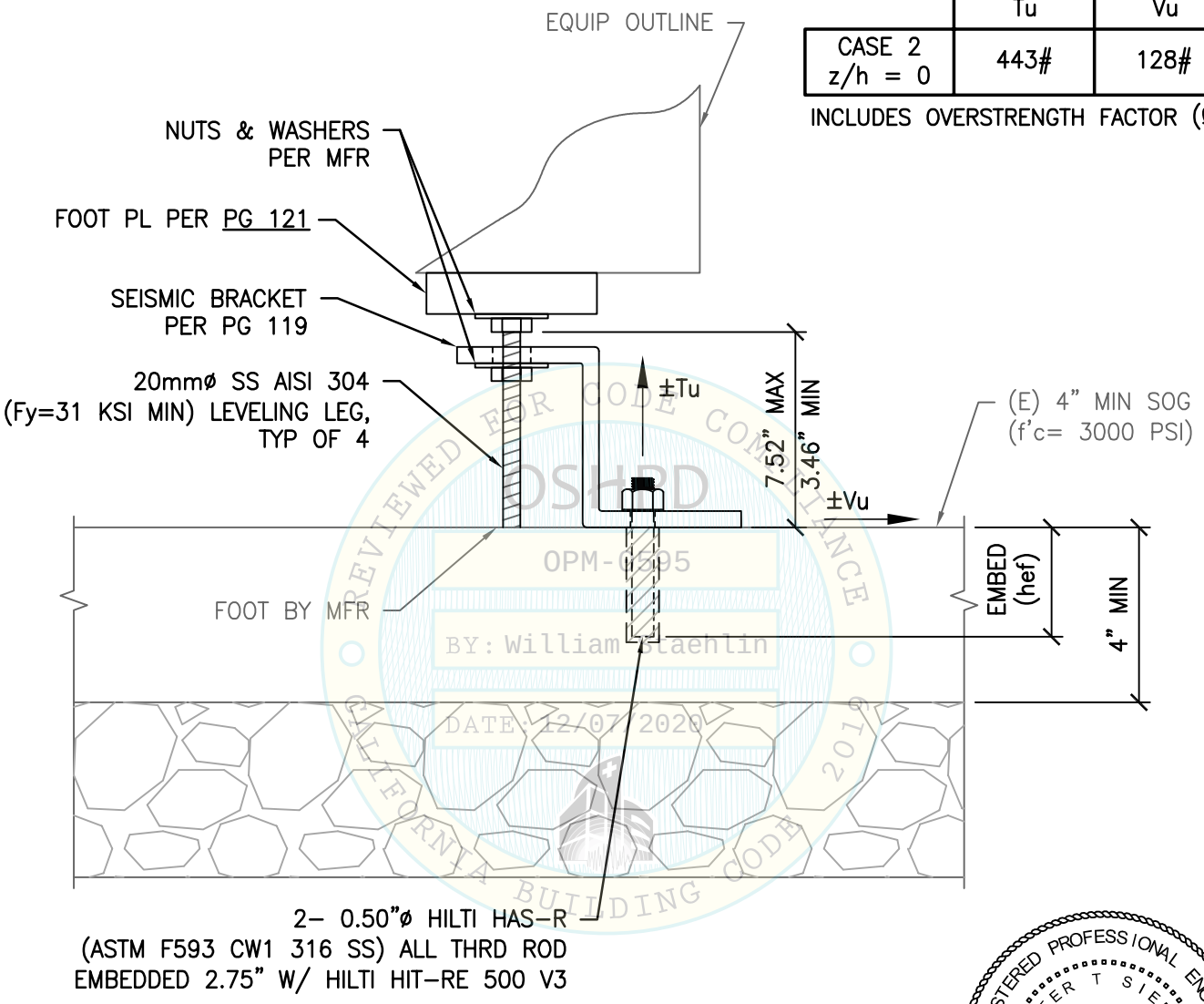
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTE:
CASTER NOT SHOWN FOR CLARITY

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	443#	128#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE
(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOT USED

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

NOT SEOR

SHEET TITLE: COMPONENT 21: TUBE STORAGE INPUT/OUTPUT MODULE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
Date:	12/01/2020
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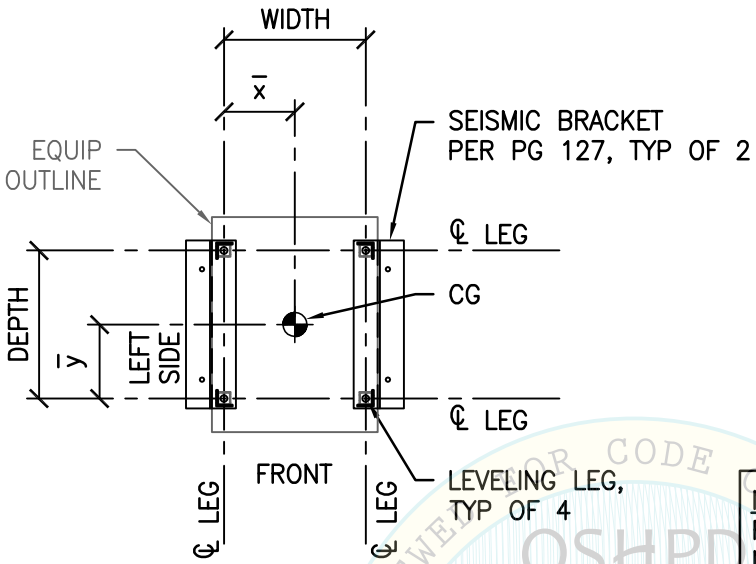
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

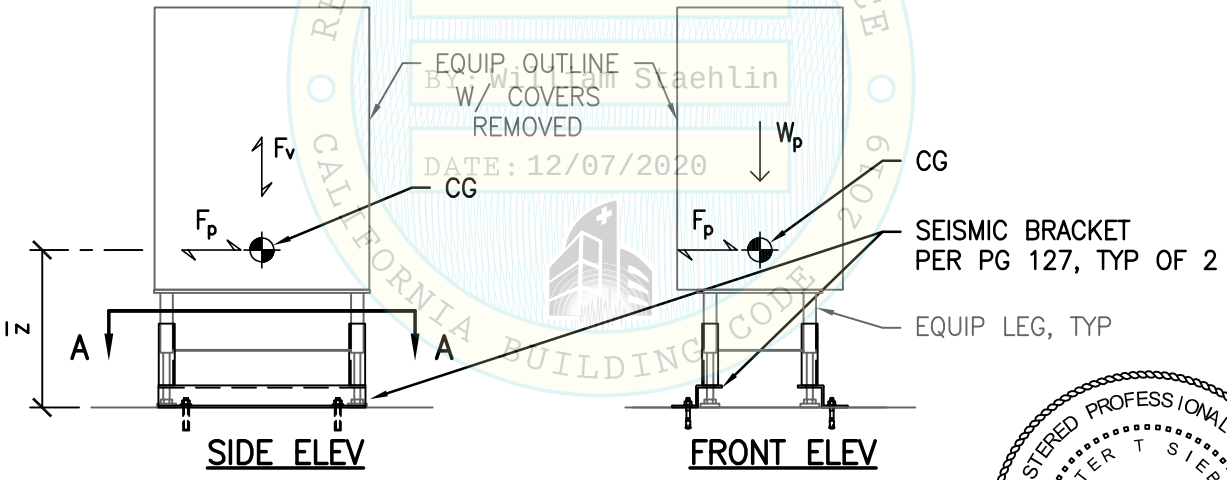
	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	Tu, max	Cu, max	Vu, max
CASE 1[3]	1042#	1273#	343#
CASE 2[2]	567#	798#	193#

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES OVERSTRENGTH FACTOR (Ω_o).
3. OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED FOR ANCHORAGE TO CONC.



BASE PLAN A–A

NOTE:
FOR COMPONENT DIMS NOT NOTED, SEE SCHED ON PAGE 11.



SIDE ELEV

FRONT ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 22: HETTICH CENTRIFUGE
BASE PLAN & ELEVATIONS

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

Job No:	20064
Date:	12/01/2020
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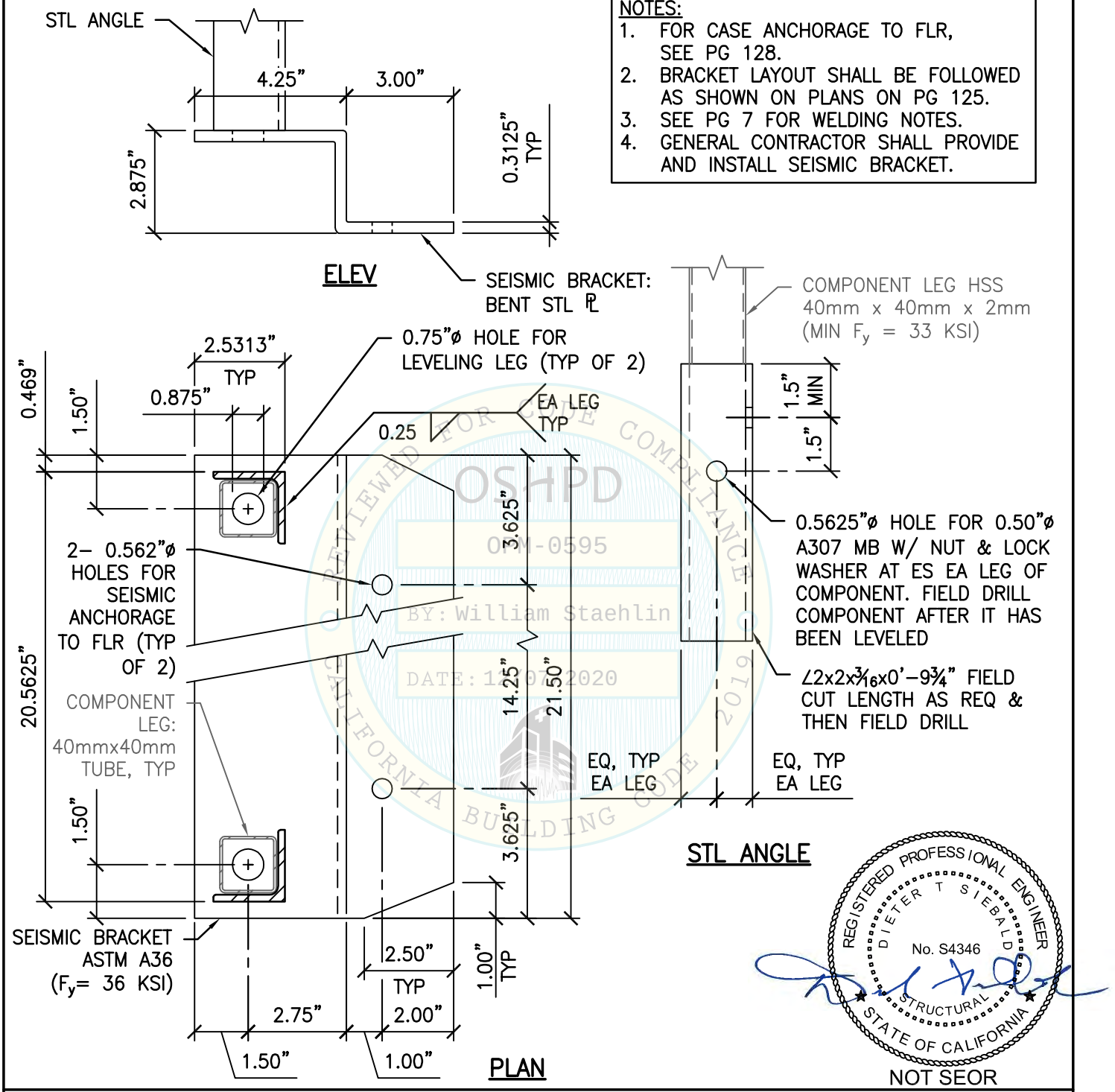
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTES:
1. FOR CASE ANCHORAGE TO FLR, SEE PG 128.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 125.
3. SEE PG 7 FOR WELDING NOTES.
4. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL SEISMIC BRACKET.



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

NOT SEOR

SHEET TITLE: COMPONENT 22: HETTICH CENTRIFUGE BRACKET DETAIL

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

Job No:	20064
Date:	12/01/2020
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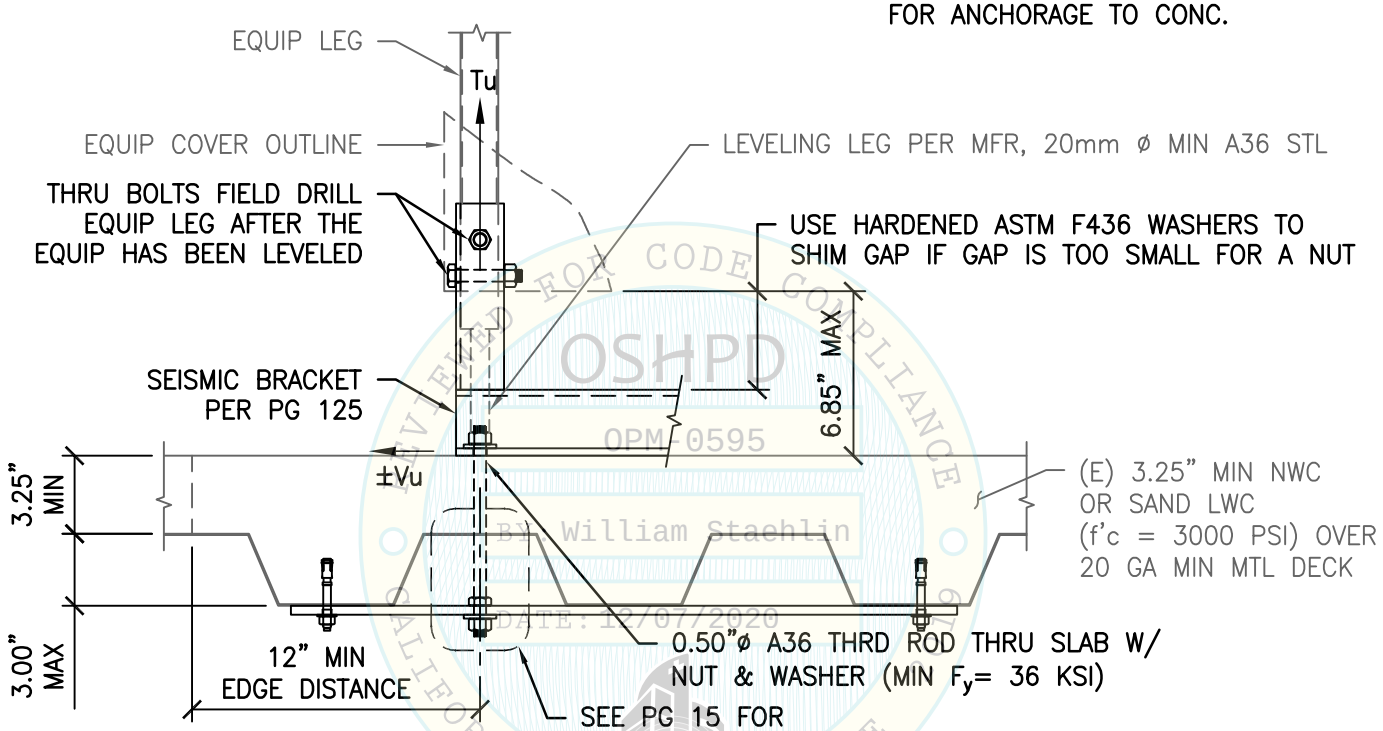
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

NOTE:
DBL NUTS AT STRUT ARE ONLY PERMITTED TO OCCUR AT ANCHOR RODS PASSING THRU HIGH FLUTES.

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	4467#	394#

OVERSTRENGTH FACTOR (Ω_o) MUST BE APPLIED TO Vu FOR ANCHORAGE TO CONC.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 22: HETTICH CENTRIFUGE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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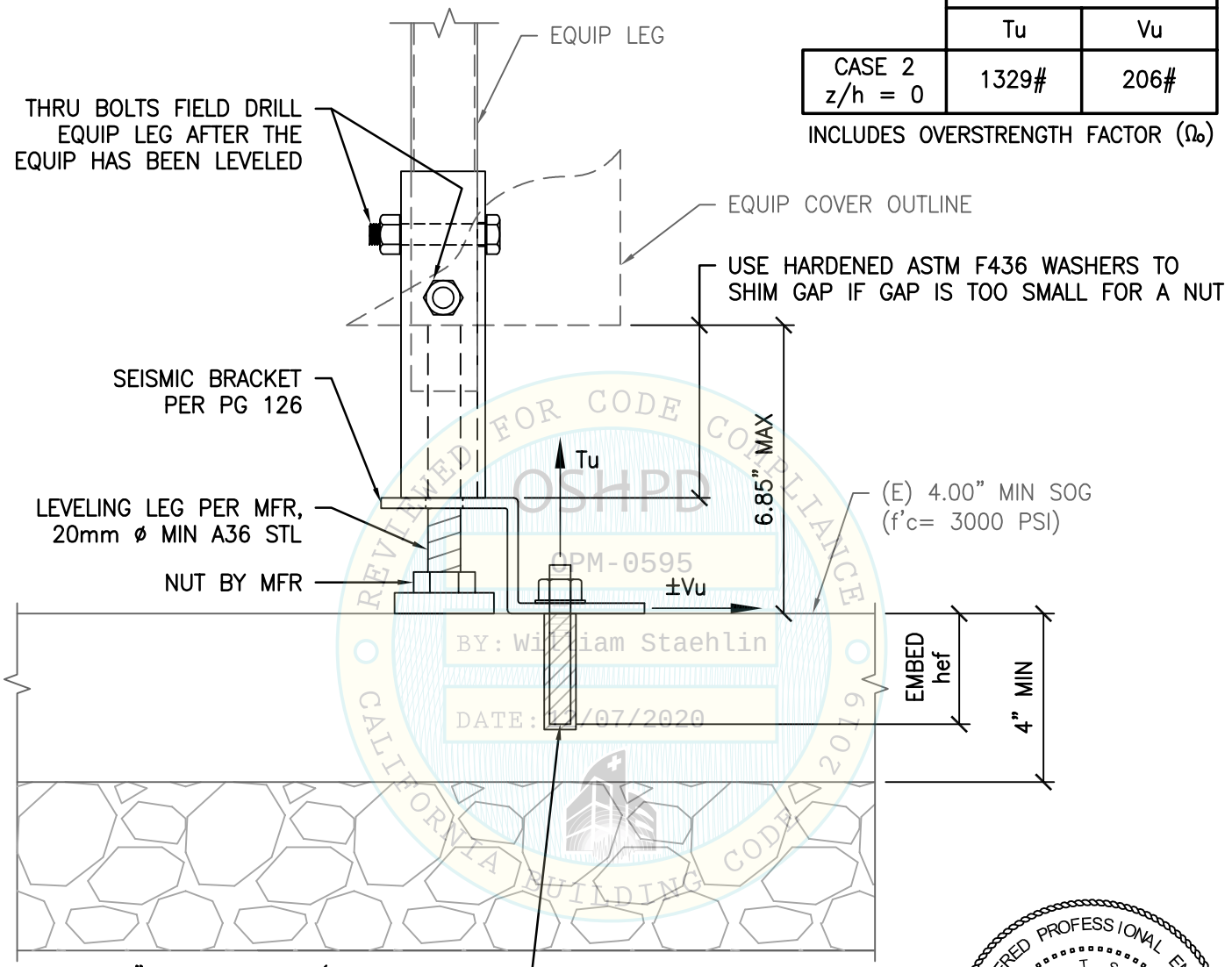
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	1329#	206#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SLAB ON GRADE
(SLAB AT OR BELOW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 22: HETTICH CENTRIFUGE SUPPORTS & ATTACHMENTS DETAIL

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

Job No:	20064
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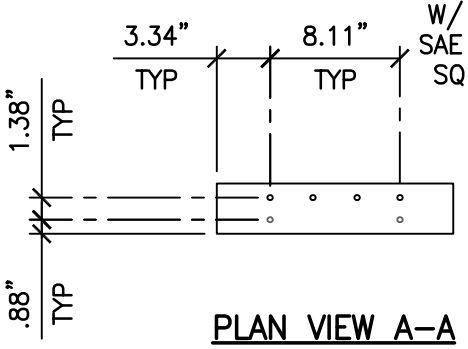
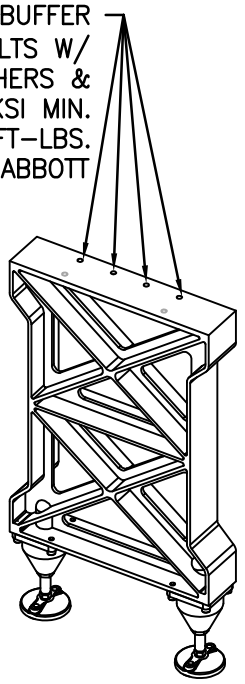
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

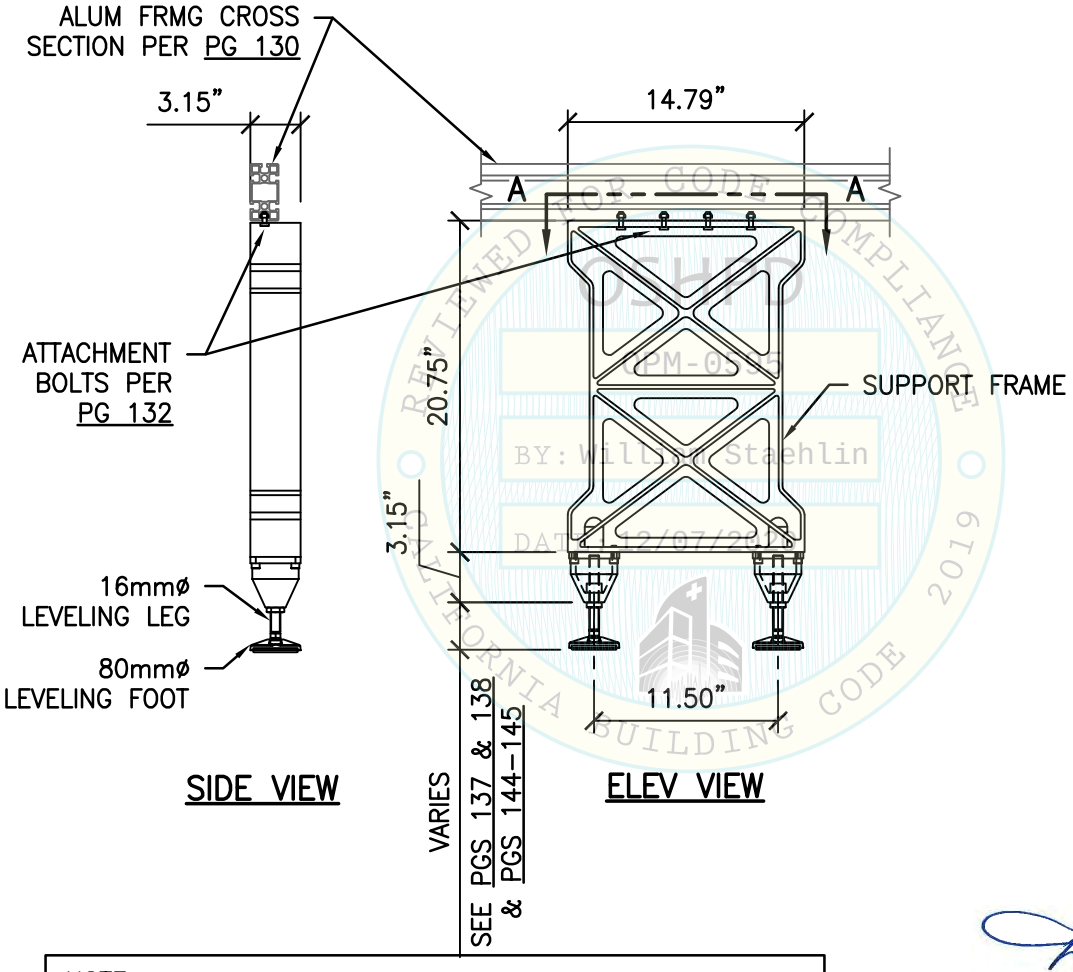


PLAN VIEW A–A

SUPPORT CONN TO WIDE–BELT BUFFER W/ 2– M8 UNI 5931–8.8 BOLTS W/ SAE THROUGH–HARDENED WASHERS & SQ SPRING NUTS. Fu= 116 KSI MIN. INSTALL TORQUE 8 FT–LBS. ATTACHMENT BY ABBOTT



ISOMETRIC VIEW



SIDE VIEW

ELEV VIEW

NOTE:
COMPONENT SUB–ASSEMBLY CONNS SHALL BE PERFORMED BY ABBOTT, NOT THE GENERAL CONTRACTOR.

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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
TYPICAL WIDE-BELT BUFFER SUPPORT FRAME

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

Job No:	20064
Date:	12/01/2020
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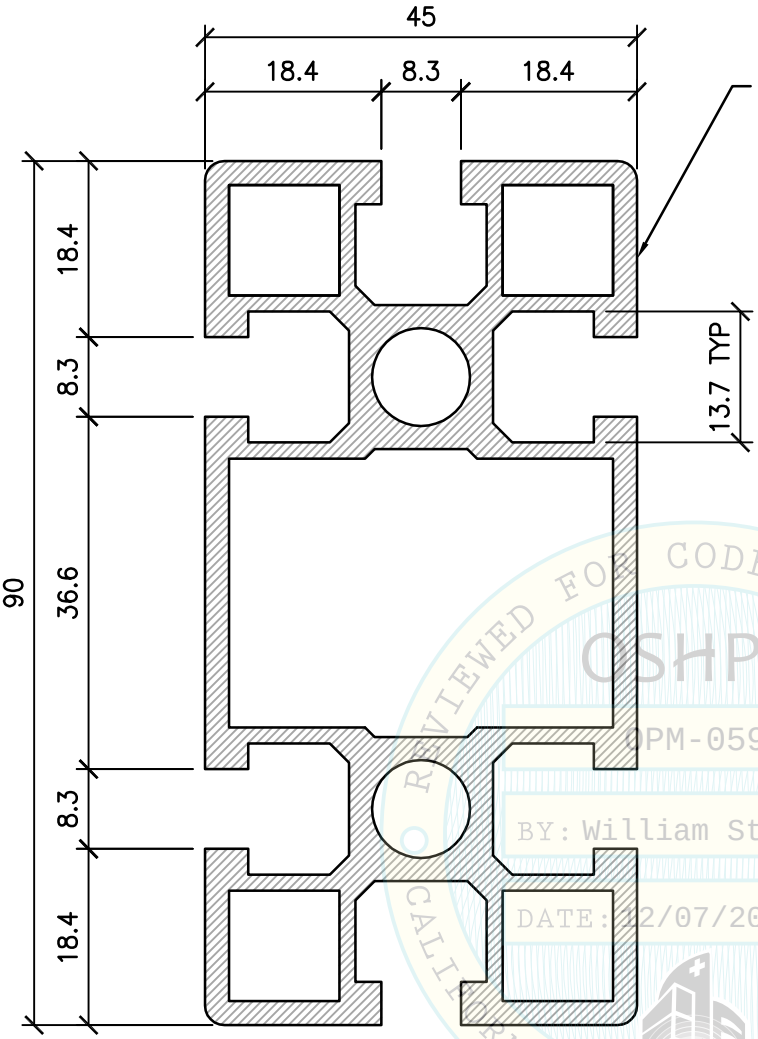
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



45x90mm SECTION

EXTRUDED ALUM FRAME CROSS SECTION.
ATTACHMENTS TO FRMG USING M8 UNI 5931–8.8 BOLTS W/ SAE THROUGH–HARDENED WASHERS & SQ SPRING NUTS, TYP.
Fu= 116 KSI MIN. INSTALL TORQUE 8 FT–LBS.
ATTACHMENT BY ABBOTT

45x90mm SECTION PROPERTIES:

Ix = 90.00 cm^4

Iy = 23.00 cm^4

Sx = 21.96 cm^3

Sy = 11.22 cm^3

A = 1112 mm^2

W = 3.00 kg/m

ALUMINUM MATERIAL PROPERTIES:

ALUM ALLOY EN AW–6060 (AlMgSi)
6060–T5

Fy = 120 MPa

Fu = 160 MPa

NOTE:
ALL DIMS SHOWN ARE IN mm.

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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
TYPICAL ALUMINUM FRAMING CROSS SECTION

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

Job No:	20064
Date:	12/01/2020
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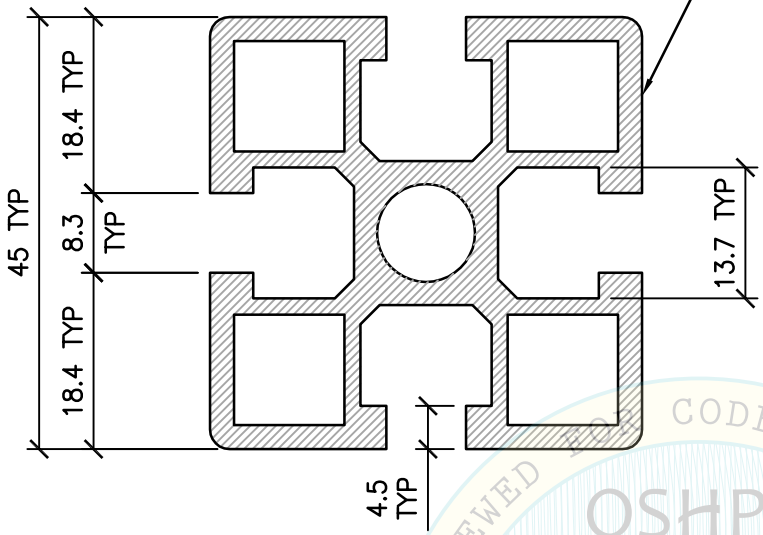

45x45mm SECTION

EXTRUDED ALUM FRAME CROSS SECTION.
ATTACHMENTS TO FRMG USING M8 UNI 5931–8.8 BOLTS W/ SAE THROUGH–HARDENED WASHERS & SQ SPRING NUTS, TYP.
Fu= 116 KSI MIN. INSTALL TOPRQUE 8 FT–LBS.
ATTACHMENT BY ABBOTT

45x45mm SECTION PROPERTIES:

Ix = 13.25 cm^4

Iy = 13.25 cm^4

Sx = 5.88 cm^3

Sy = 5.88 cm^3

A = 721 mm^2

W = 1.95 kg/m

ALUMINUM MATERIAL PROPERTIES:

ALUM ALLOY EN AW–6060 (AlMgSi)
6060–T5

Fy = 120 MPa

Fu = 160 MPa

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

NOT SEOR

NOTE:
ALL DIMS SHOWN ARE IN mm.

SHEET TITLE: COMPONENTS 23 & 24:
TYPICAL ALUMINUM FRAMING CROSS SECTION

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

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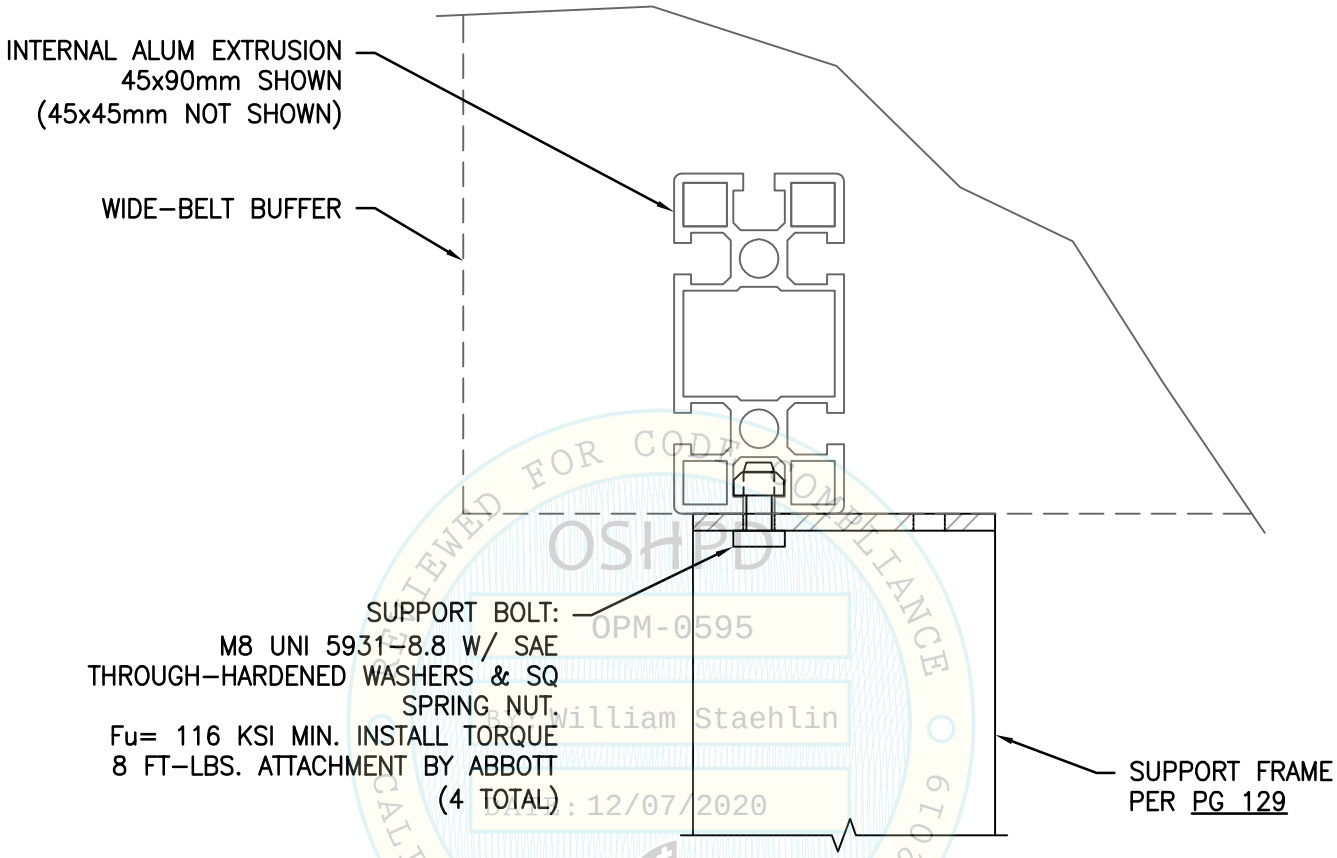
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



SUPPORT CONN

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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
TYPICAL SUPPORT ATTACHMENT

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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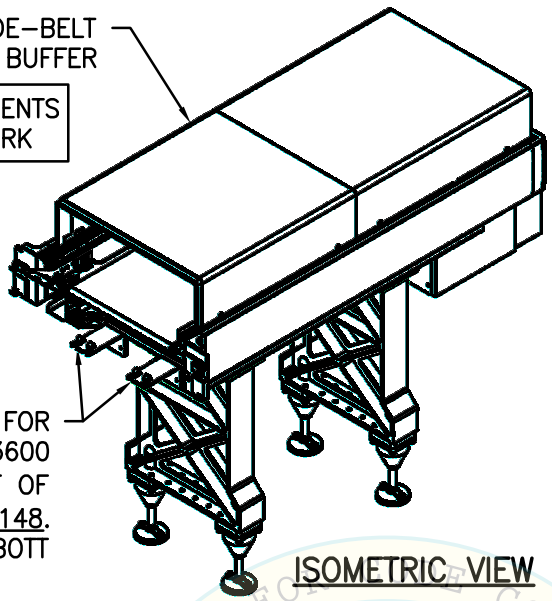
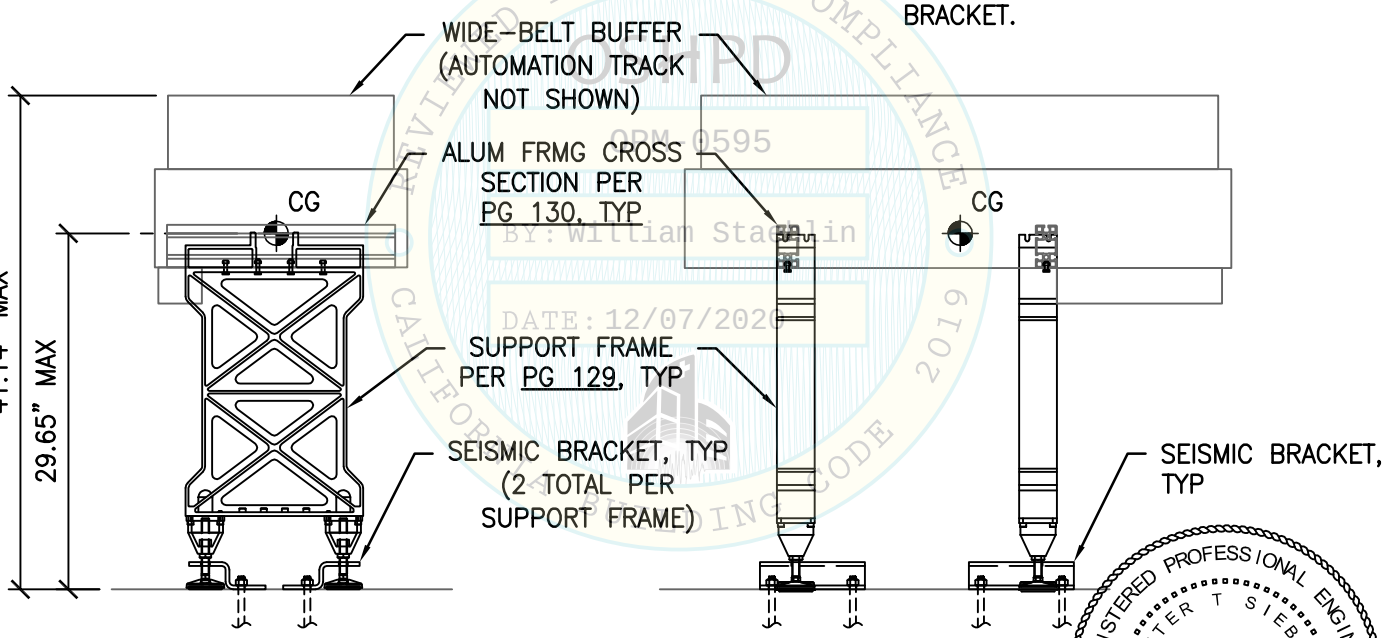
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ISOMETRIC VIEW

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1	1165#	1315#	485#[2]
CASE 2	643#[2]	793#[2]	182#[2]

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318–11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.
3. SEE PGS 135 TO 138 FOR THE FABRICATION & INSTALLATION REQUIREMENTS OF THE SEISMIC BRACKET.



FRONT ELEV

SIDE ELEV

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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY) 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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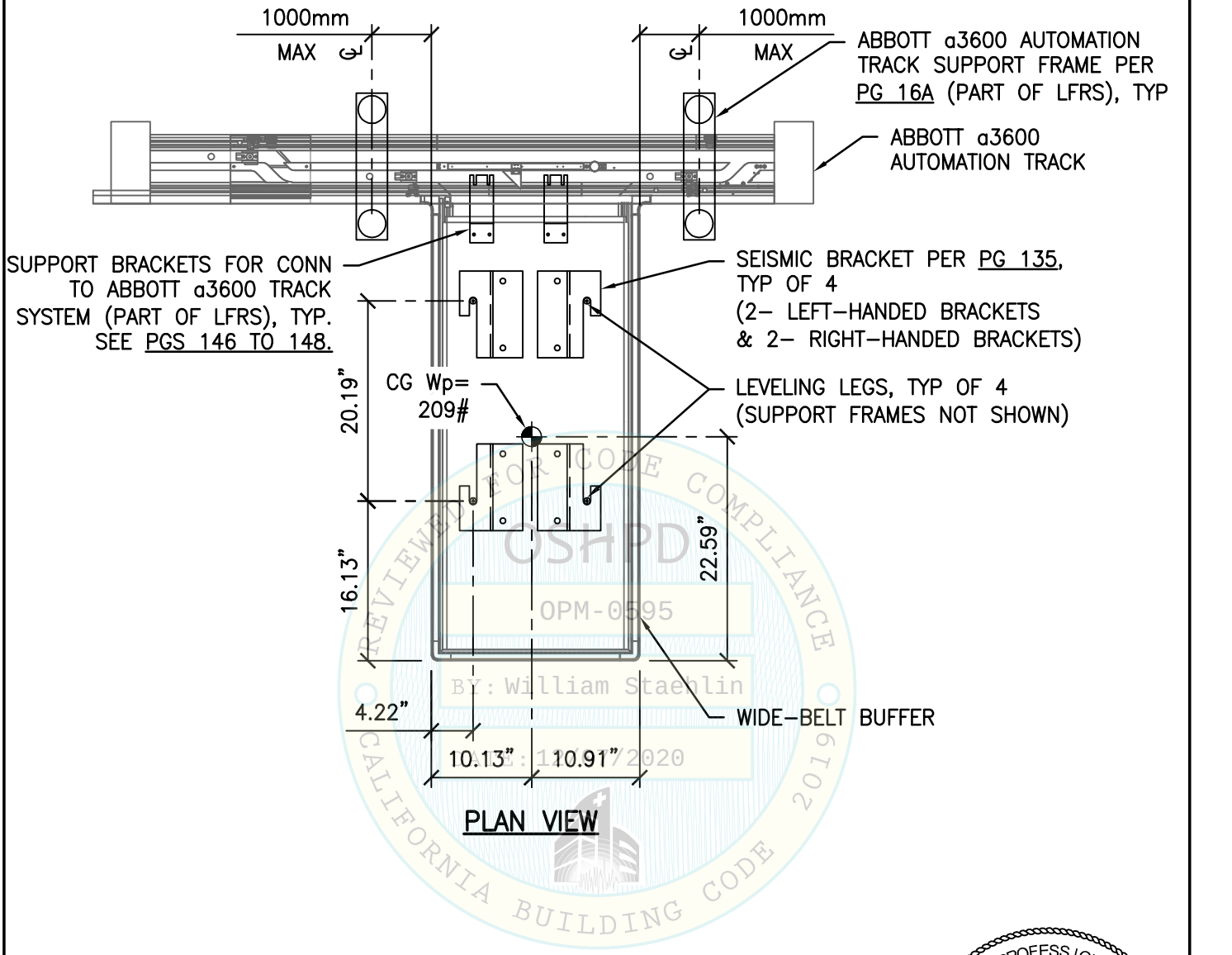
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY)
BASE PLAN VIEW

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

Job No:	20064
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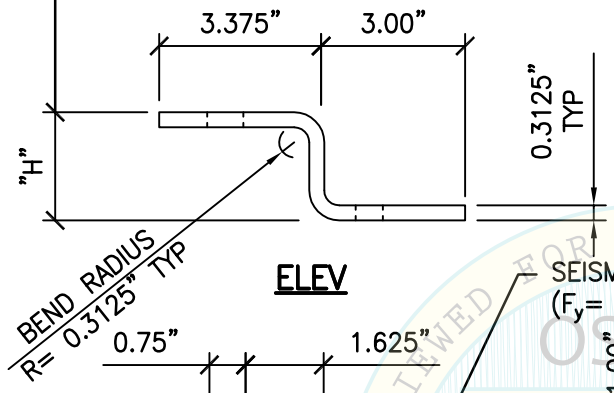
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

"H" VARIES TO ACCOMMODATE VERT ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

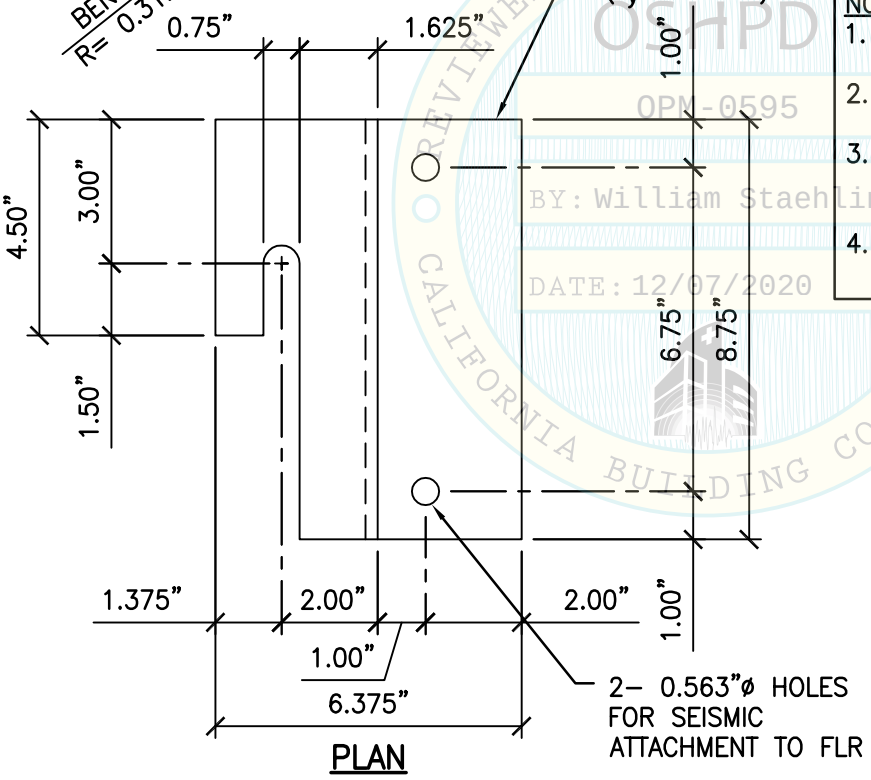
BRACKET A: "H" = 0.75" FOR 0.75" ≤ CLR ≤ 2.25"

BRACKET B: "H" = 1.875" FOR 1.875" ≤ CLR ≤ 3.375"

BRACKET C: "H" = 3.00" FOR 3.00" ≤ CLR ≤ 3.75"
(MAX HEIGHT OF CLR CORRESPONDING TO MAX ABBOTT TRACK HEIGHT)



ELEV



PLAN

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 137 & 138.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 134.
3. LEFT–HAND BRACKET SHOWN. SEE BASE PLAN A–A ON PG 134 FOR RIGHT–HAND BRACKET CONFIGURATION.
4. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 840mm
B = 885mm
C = 910mm

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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY)
SEISMIC BRACKET DETAIL

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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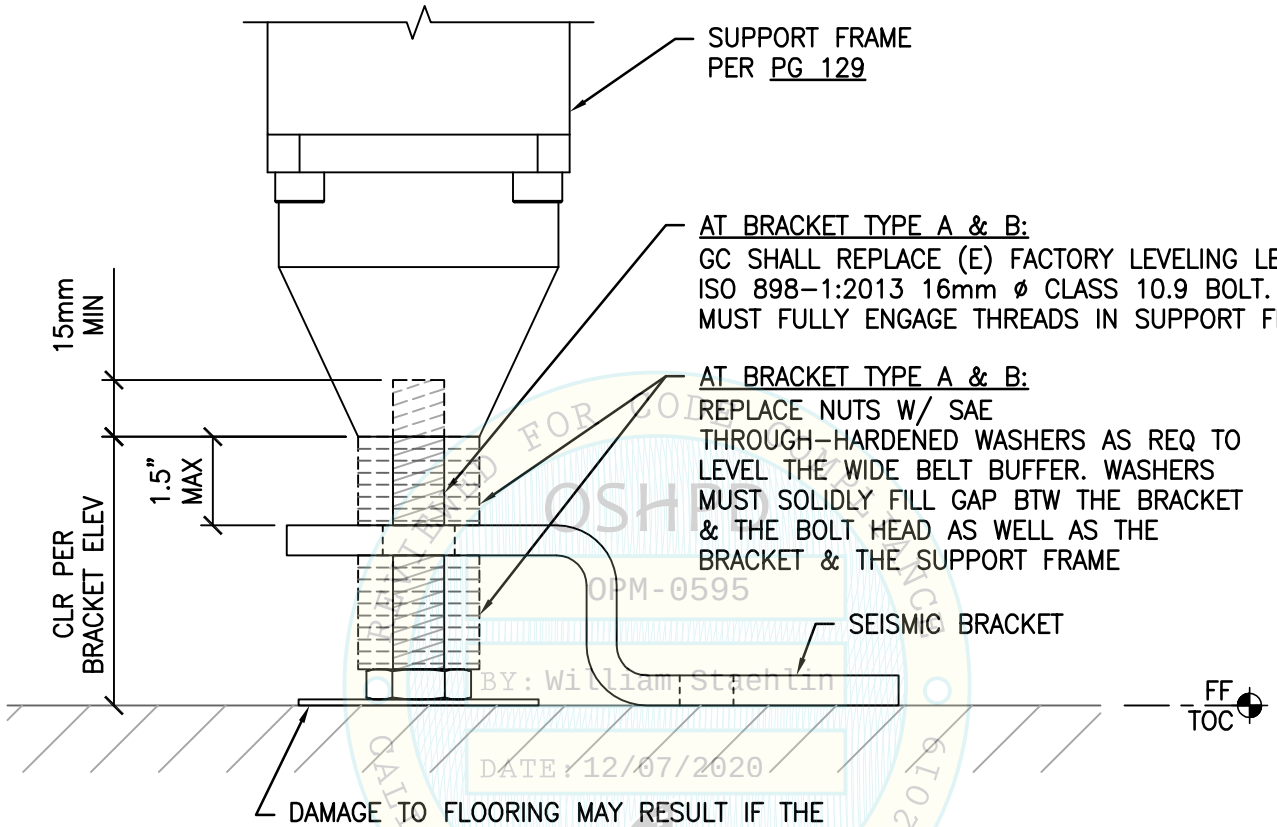
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY)
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:	20064
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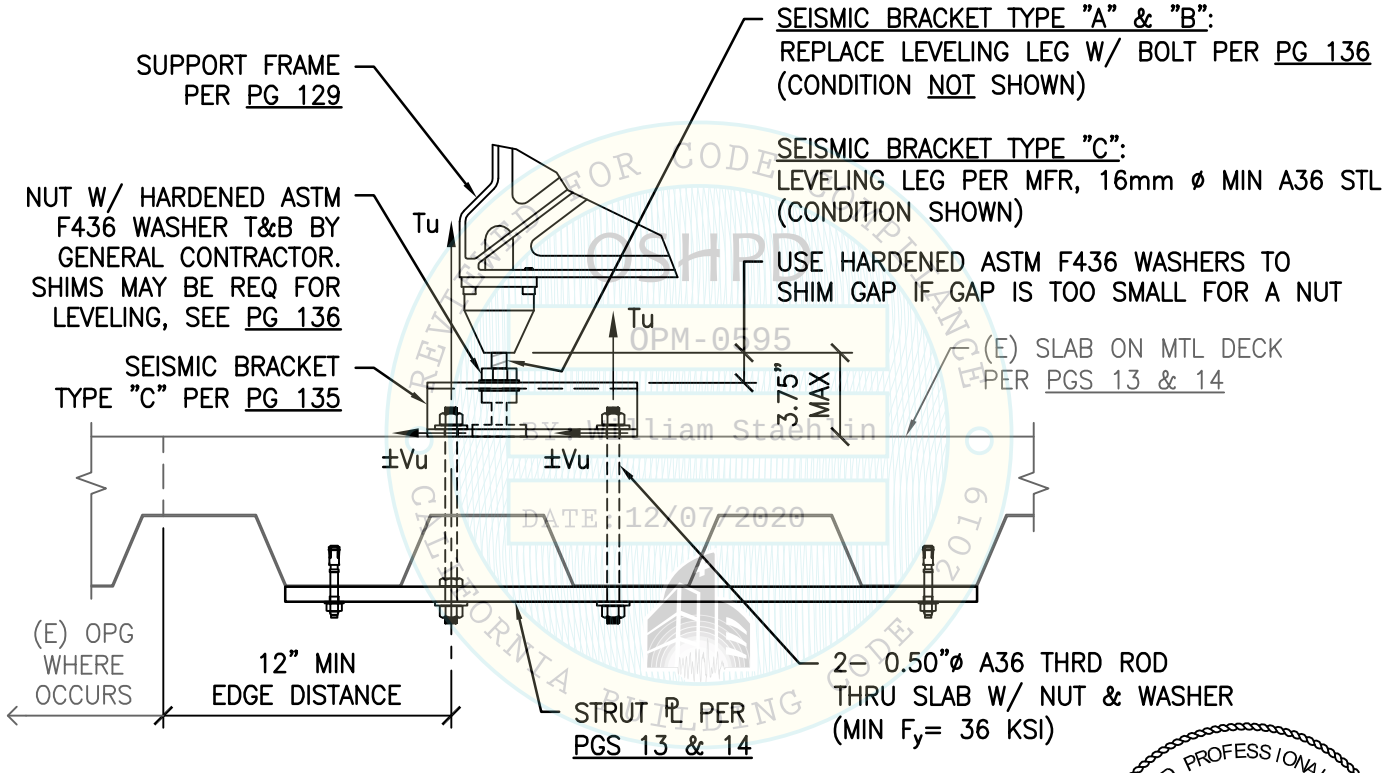
	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1684#	386#[1]

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318–11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY)
SUPPORT & ATTACHMENT DETAIL - CASE 1

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

Job No:	20064
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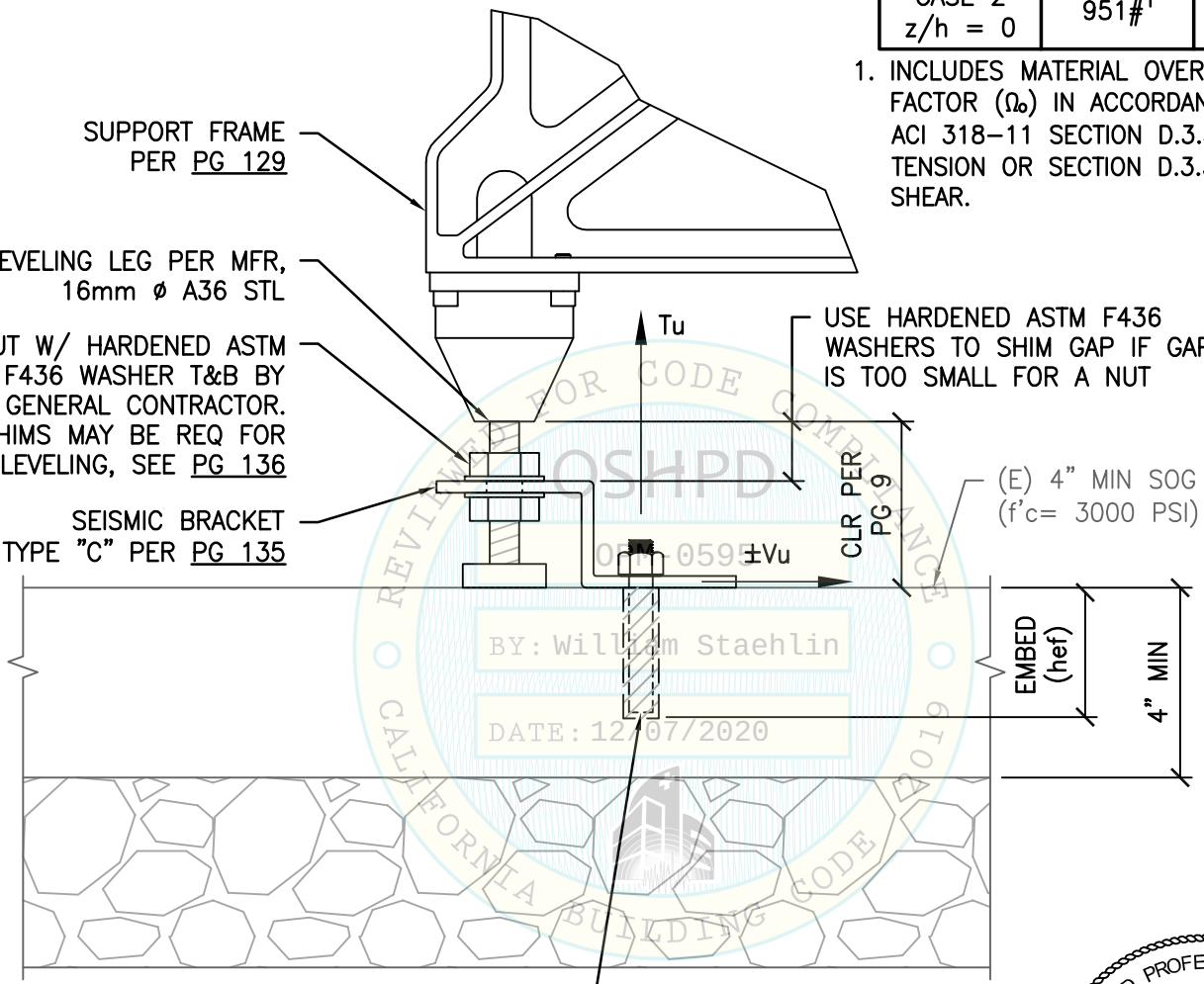
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	951#[1]	124#[1]

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318-11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.



CASE 2 - SOG

(SLAB AT OR BLW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 23: WIDE-BELT BUFFER (240 SAMPLE CAPACITY)
SUPPORT & ATTACHMENT DETAIL - CASE 2

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

Job No:	20064
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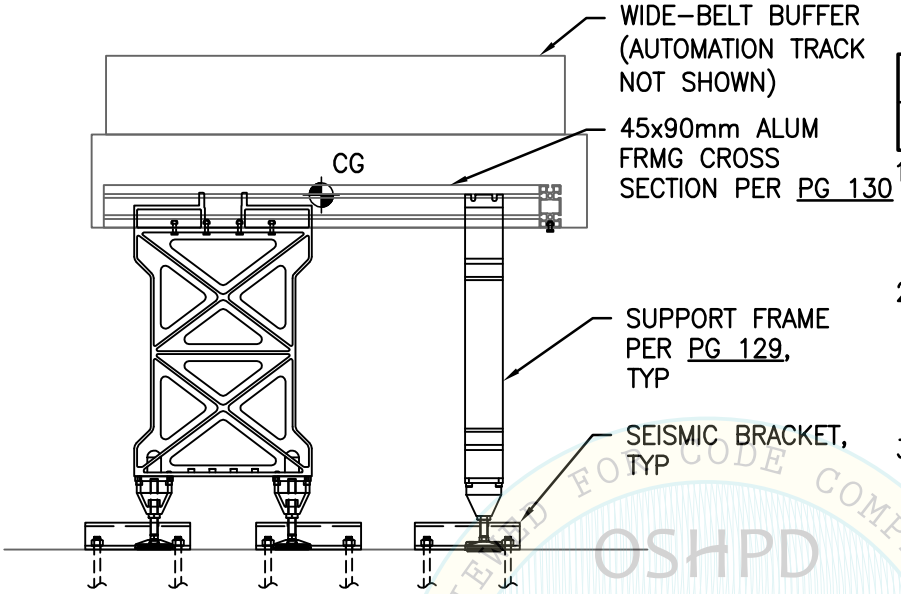
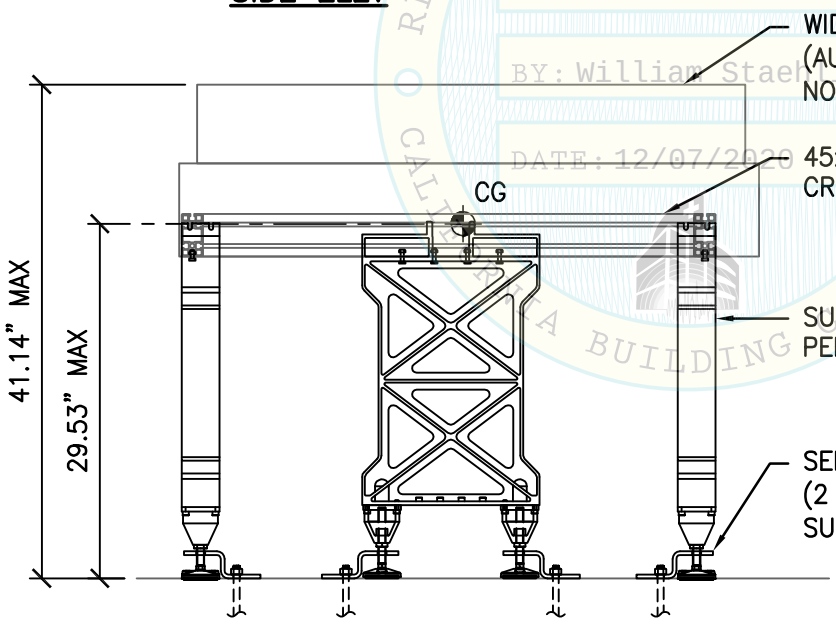
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



SIDE ELEV



FRONT ELEV

	MAX ANCHOR FORCES AT LRFD AT LEVELING LEG[1]		
	T_{max}	C_{max}	V_{max}
CASE 1	590#	766#	827#[2]
CASE 2	494#[2]	318#[2]	464#[2]

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318–11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.
3. SEE PGS 142 TO 145 FOR THE FABRICATION & INSTALLATION REQUIREMENTS OF THE SEISMIC BRACKET.

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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY) ELEVATIONS

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

Job No:	20064
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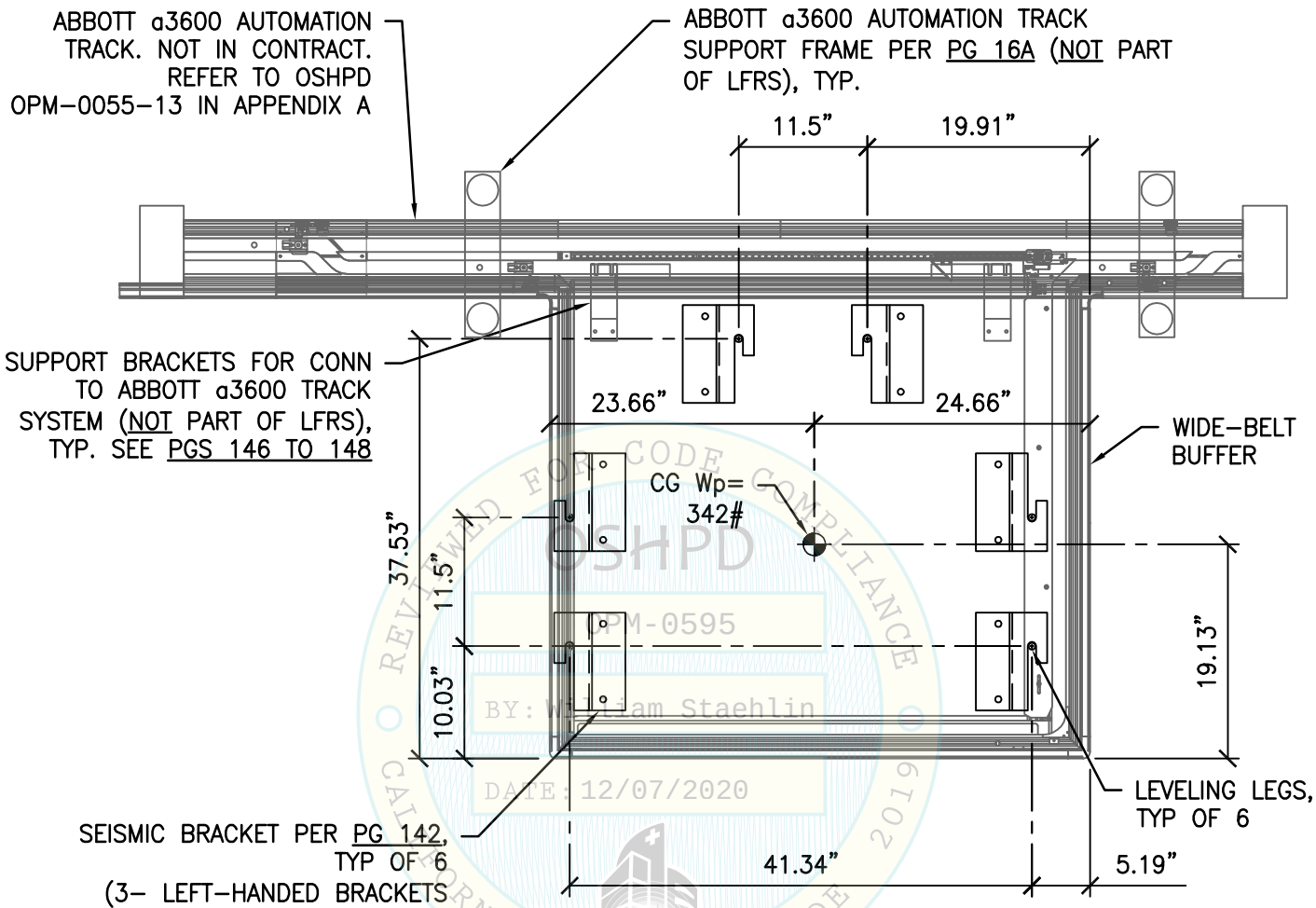
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY)
BASE PLAN VIEW

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

Job No:	20064
Date:	12/01/2020
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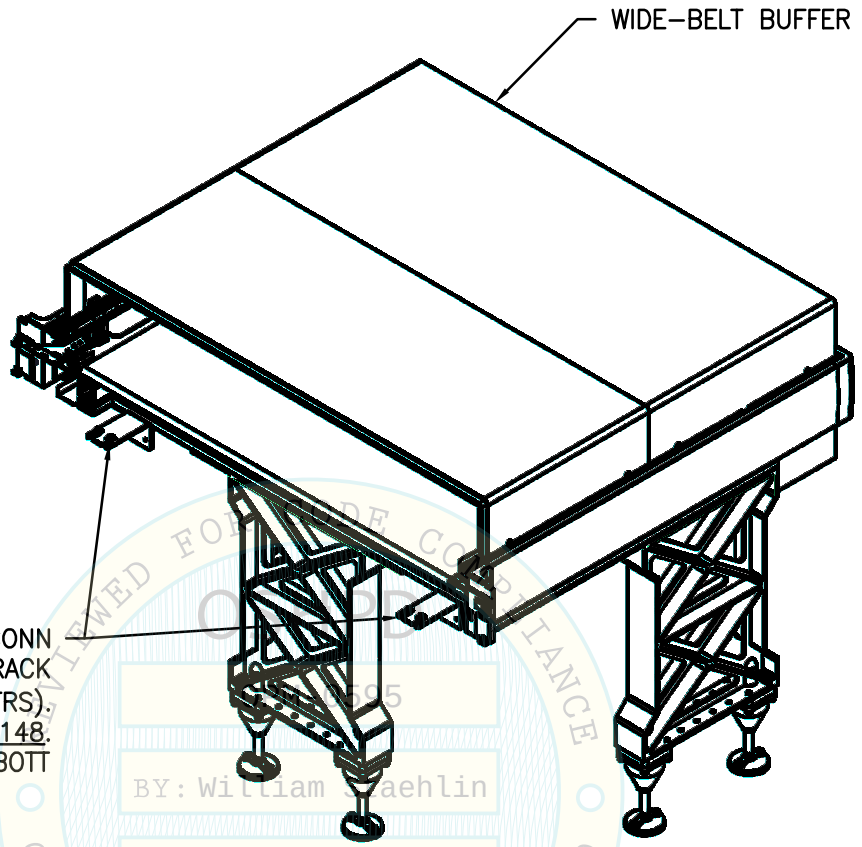
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ISOMETRIC VIEW

LIGHT–TONED COMPONENTS
NOT IN SCOPE OF WORK

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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY)
ISOMETRIC VIEW

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
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Job No:	20064
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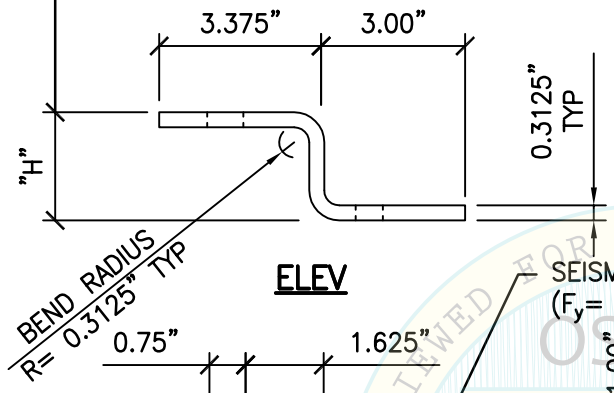
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

"H" VARIES TO ACCOMMODATE VERT ADJUSTMENT OF THE COMPONENT FOR LEVELING PURPOSES AS MEASURED FROM THE FLR TO THE BOTT OF THE COMPONENT PER THE CASE 1 & CASE 2 FLR TO COMPONENT CLEARANCES AS FOLLOWS:

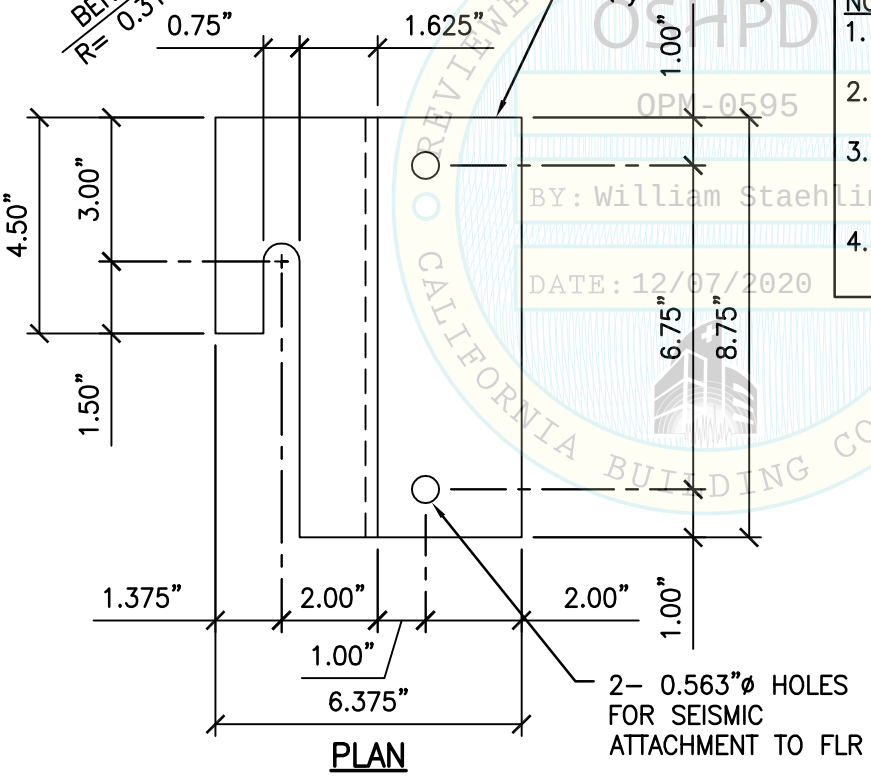
BRACKET A: "H" = 0.75" FOR 0.75" ≤ CLR ≤ 2.25"

BRACKET B: "H" = 1.875" FOR 1.875" ≤ CLR ≤ 3.375"

BRACKET C: "H" = 3.00" FOR 3.00" ≤ CLR ≤ 3.75"
(MAX HEIGHT OF CLR CORRESPONDING TO MAX ABBOTT TRACK HEIGHT)



ELEV



PLAN

NOTES:
1. FOR CASE 1 & CASE 2 ANCHORAGE TO FLR, SEE PGS 137 & 138.
2. BRACKET LAYOUT SHALL BE FOLLOWED AS SHOWN ON PLANS ON PG 134.
3. LEFT-HAND BRACKET SHOWN. SEE BASE PLAN A-A ON PG 134 FOR RIGHT-HAND BRACKET CONFIGURATION.
4. GENERAL CONTRACTOR SHALL PROVIDE & INSTALL SEISMIC BRACKET.

FOR ABBOTT USE:
MAX TRACK HT PER BRACKET
A = 840mm
B = 885mm
C = 910mm

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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY)
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:	20064
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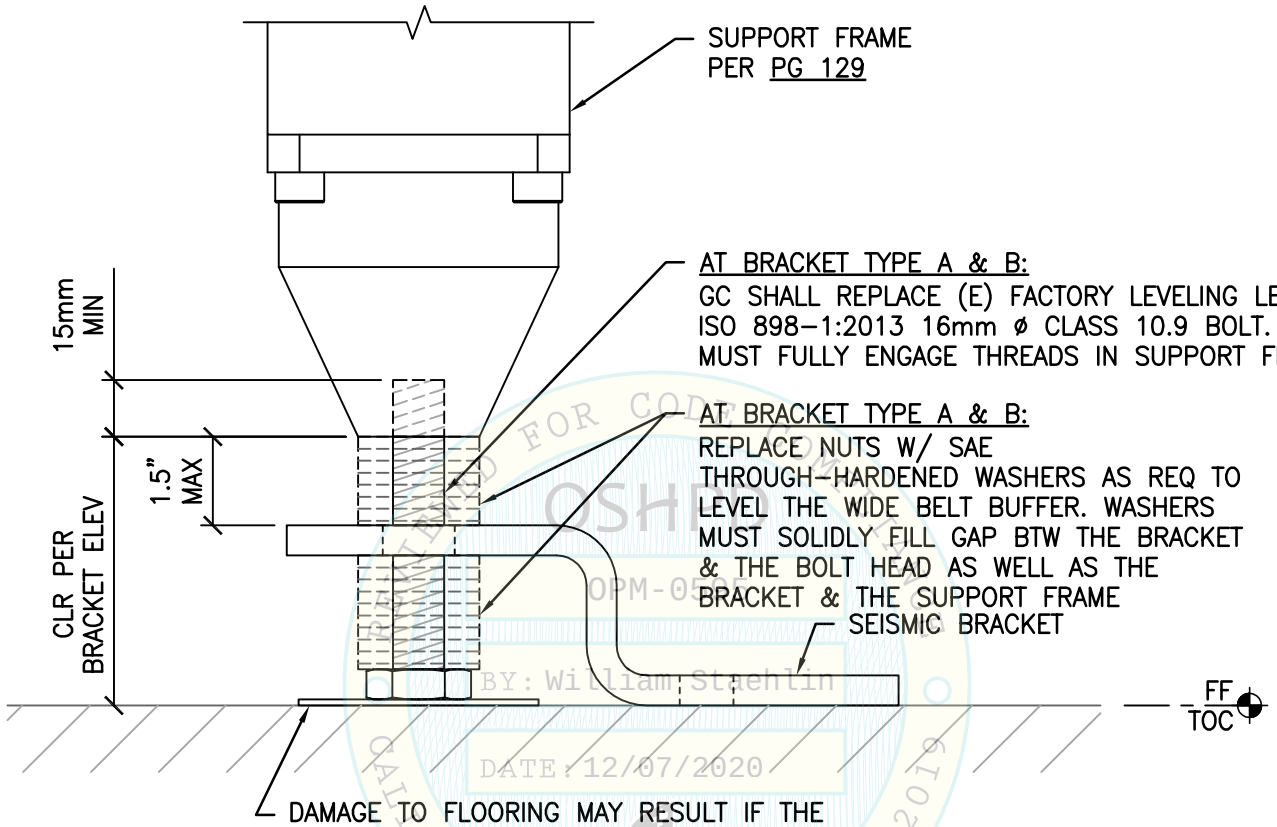
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY)
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:	20064
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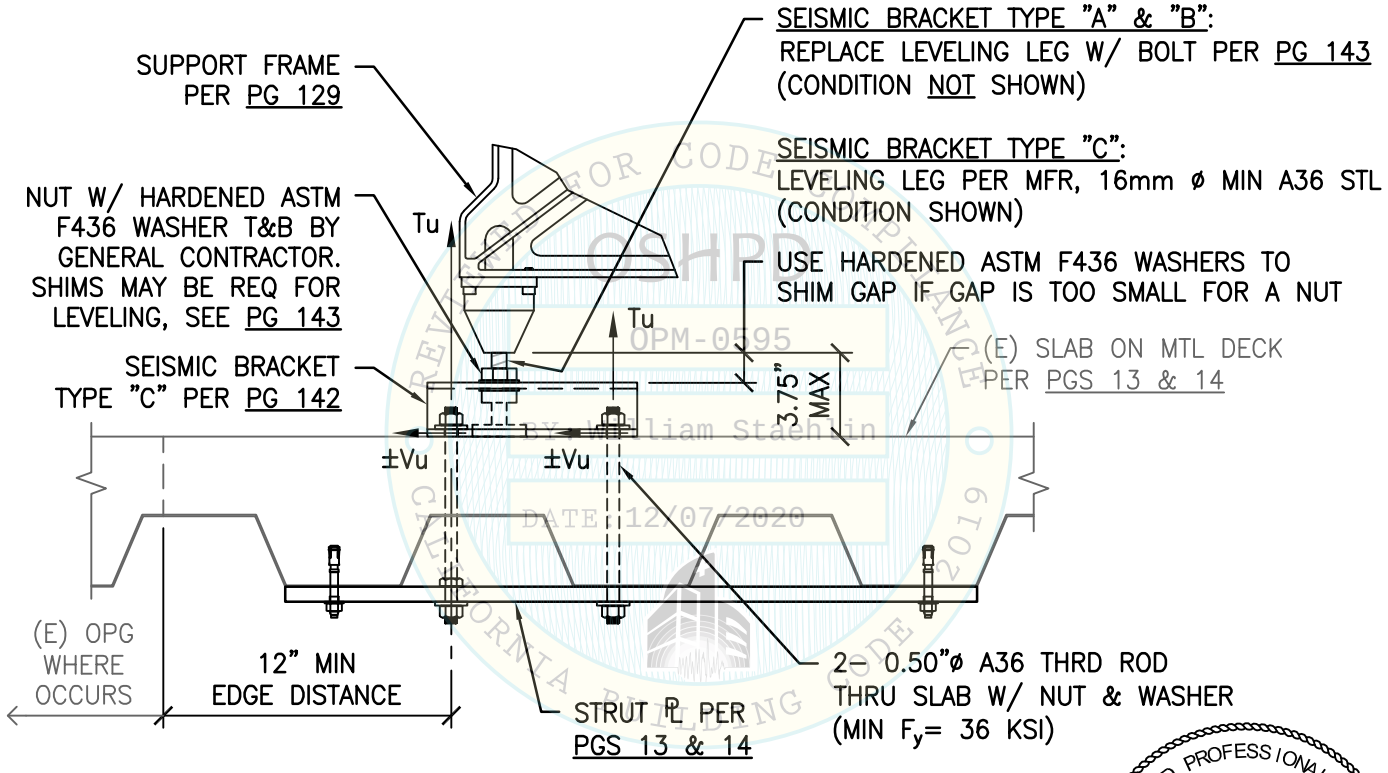
	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 1.0$	1202#	690#[1]

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318–11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.



CASE 1 – SUSPENDED FLR W/ THRU BOLTS

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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY)
SUPPORT & ATTACHMENT DETAIL - CASE 1

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

Job No:	20064
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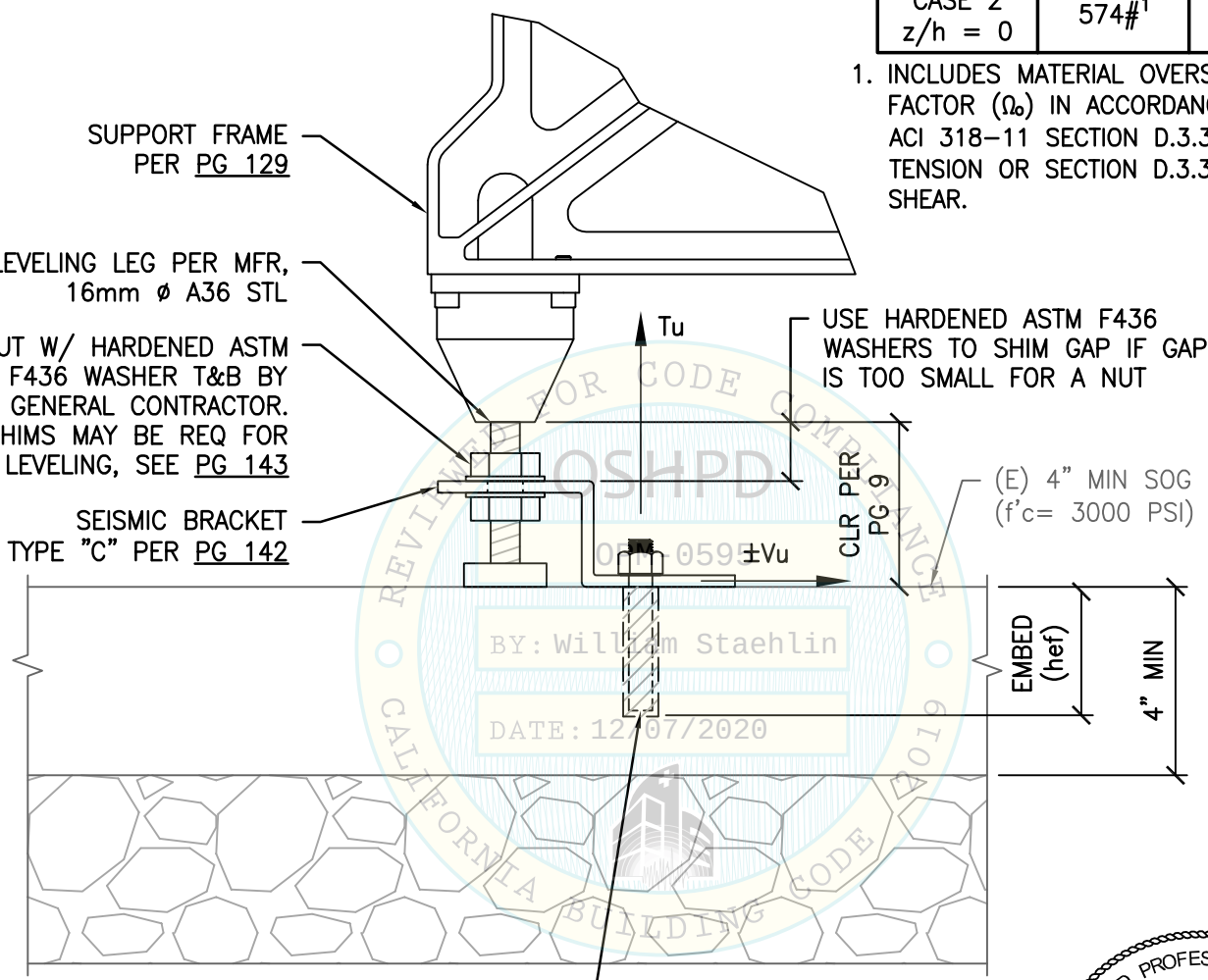
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h = 0	574#[1]	213#[1]

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o) IN ACCORDANCE W/ ACI 318–11 SECTION D.3.3.4.3(d) FOR TENSION OR SECTION D.3.3.5.3(c) FOR SHEAR.



CASE 2 – SOG

(SLAB AT OR BLW GRADE)

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

NOT SEOR

SHEET TITLE: COMPONENT 24: WIDE-BELT BUFFER (600 SAMPLE CAPACITY) SUPPORT & ATTACHMENT DETAIL - CASE 2

CYS STRUCTURAL ENGINEERS, INC.
2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833
TEL (916) 920-2020
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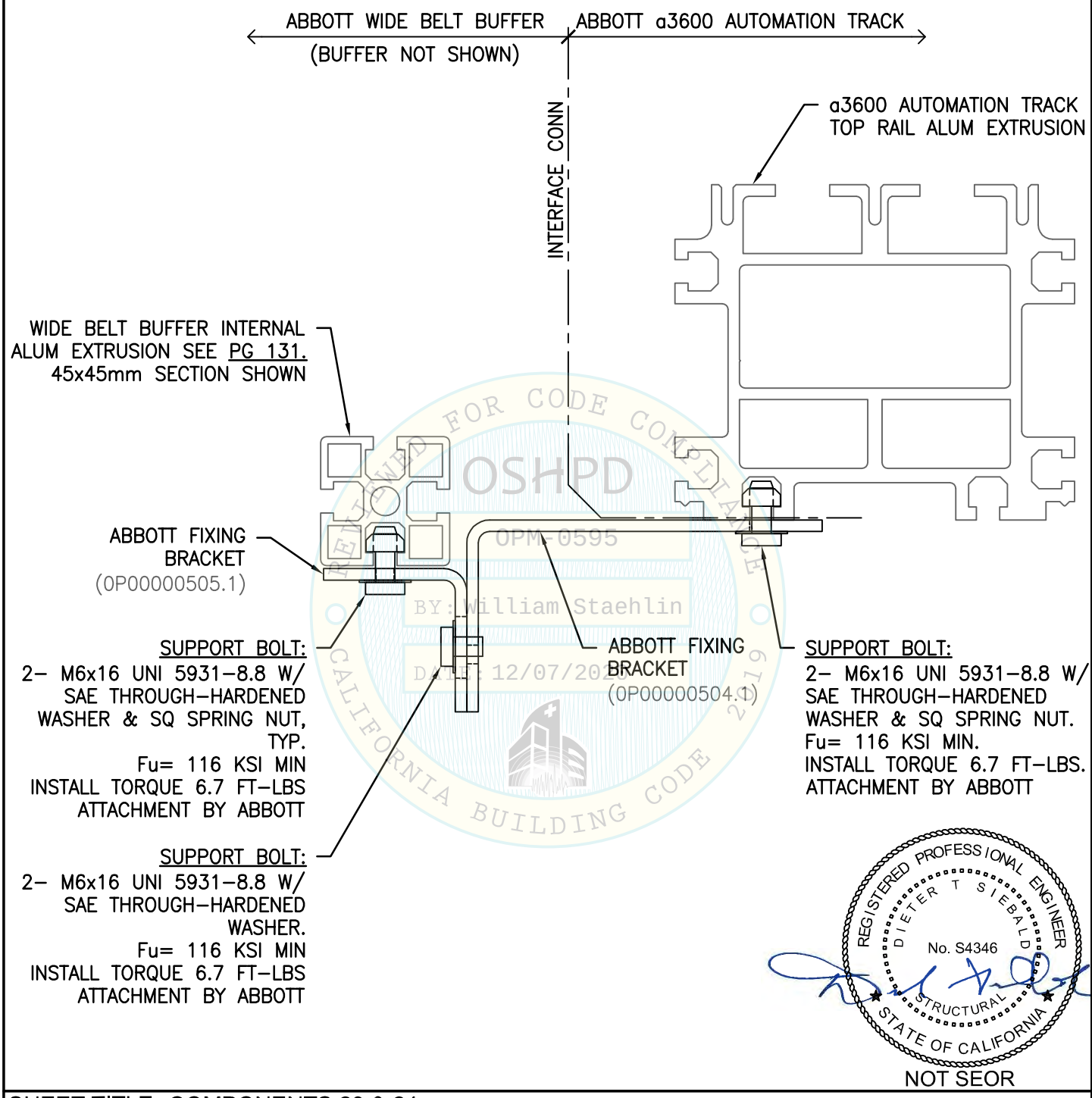
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
WIDE-BELT BUFFER TO a3600 AUTOMATION TRACK ATTACHMENT

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

Job No:	20064
Date:	12/01/2020
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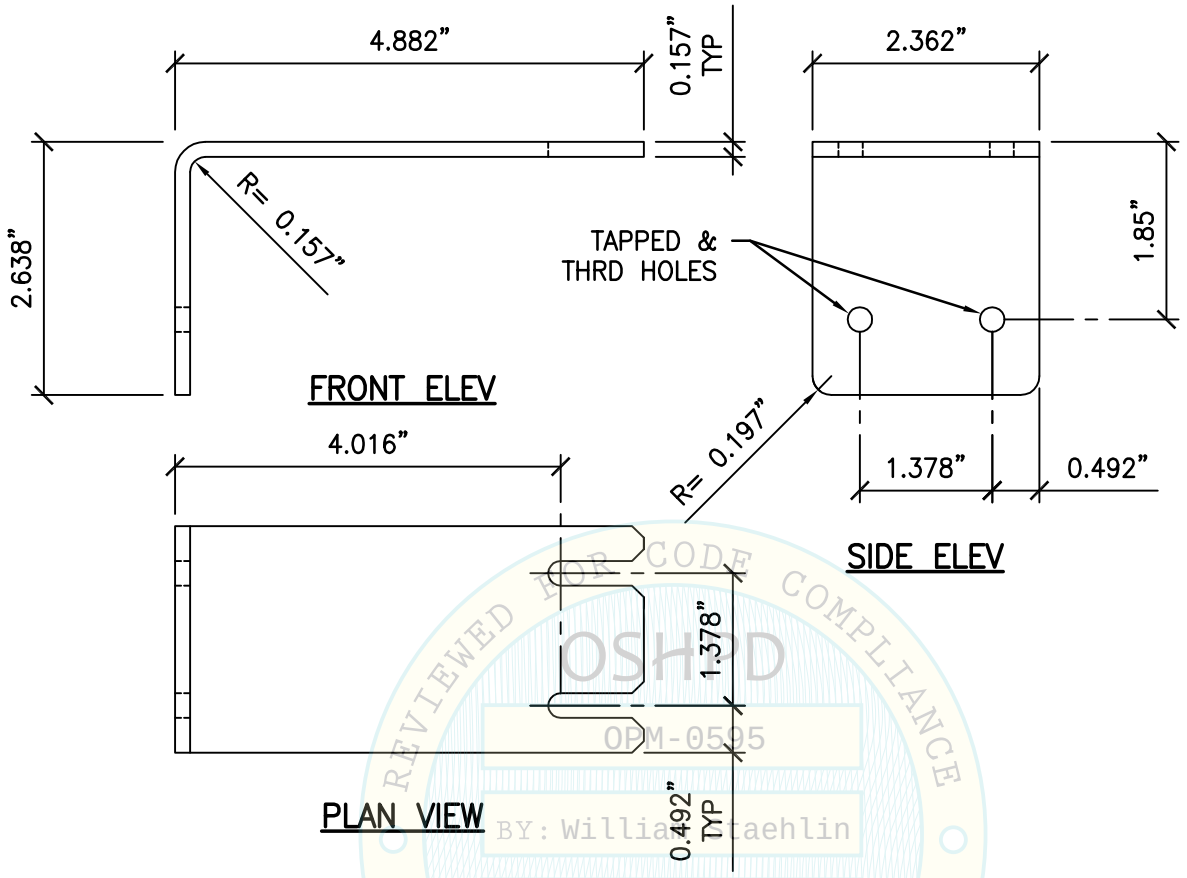
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



ABBOTT FIXING BRACKET
(0P00000504.1)
(STEEL – Fe360 Fy MIN = 33 KSI)

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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
WIDE-BELT BUFFER TO a3600 AUTOMATION TRACK ATTACHMENT

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

Job No:	20064
Date:	12/01/2020
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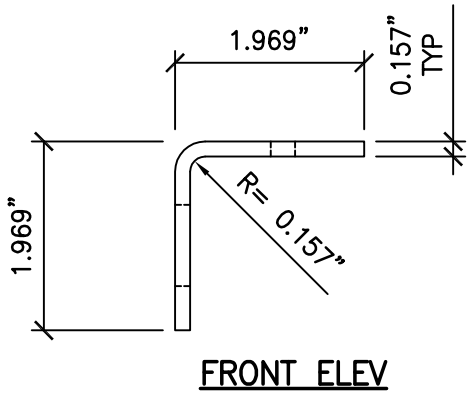
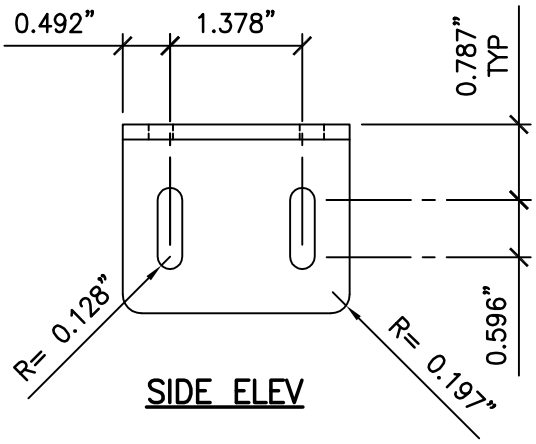
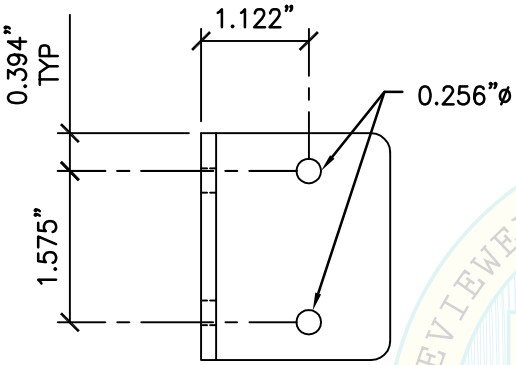
ABBOTT LABORATORIES
EQUIPMENT SUPPORTS & ATTACHMENTS



FRONT ELEV



SIDE ELEV



PLAN VIEW

ABBOTT FIXING BRACKET
(0P00000505.1)
(STEEL – Fe360 Fy MIN = 33 KSI)

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

NOT SEOR

SHEET TITLE: COMPONENTS 23 & 24:
WIDE-BELT BUFFER TO a3600 AUTOMATION TRACK ATTACHMENT

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

Job No:	20064
Date:	12/01/2020
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